



Acoustic Scattering by Three-Dimensional Stators and Rotors Using the SOURCE3D Code Volume 2: Scattering Plots

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CHAPTER 1

SCATTERING COEFFICIENT PLOTS

This second volume of *Acoustic Scattering by Three-Dimensional Stators and Rotors Using the SOURCE3D Code* provides the scattering plots referenced by Volume 1 (Ref. 1). Input waves for the stator and rotor have modal indices (s, k, n) ranging from (1,1,1) to (3,3,3), where s is the blade passing frequency (BPF) harmonic index, k the vane passing frequency harmonic index, and n the duct radial mode index.* Output waves have indices satisfying the scattering requirements discussed in Ref. 1. They also fall in the range (1,1,1) to (3,3,3). Input indices are designated (si, ki, ni) and output ones are denoted (s, k, n) .

There are 648 plots in this report. Half are for the 8750 RPM "high speed" operating condition and the other half are for the 7031 RPM "mid speed" operating condition. The plots are arranged so that, for each input wave (si, ki, ni) , there are 12 sets of plots. Each plot has curves for the three output radial modes, $n = 1, 2, 3$, and a curve for the total power. The total power curves are explained further in Ref. 1. Within each set of 12 plots, there are, first, three rotor reflection plots, next three stator reflection plots, then three rotor transmission plots, and, finally, three stator transmission plots. The three plots for rotor reflection and those for rotor transmission are for output waves with $s = 1, 2, 3$. Similarly, for stator reflection and transmission, they are for output waves with $k = 1, 2, 3$. For instance, for the typical case of the input wave (1,1,1), for the rotor, there are reflection plots for the output indices $(s = 1, k = 1, n = 1, 2, 3)$, $(s = 2, k = 1, n = 1, 2, 3)$, and $(s = 3, k = 1, n = 1, 2, 3)$. For the stator, there are reflection plots for the output indices $(s = 1, k = 1, n = 1, 2, 3)$, $(s = 1, k = 2, n = 1, 2, 3)$, and $(s = 1, k = 3, n = 1, 2, 3)$. This pattern carries over for each choice of input indices (si, ki) , where these indices follow the order (1,1), (1,2), (1,3), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3). A full set of plots for all these indices is given first for $ni = 1$, then for $ni = 2$ and $ni = 3$. The high speed plots are presented first in Section 1.1, the mid speed ones afterwards in Section 1.2. Sometimes a plot will be shown on a page, but there will be no curves on this plot. This will occur for cases where, for the given input mode, all of the scattering coefficients are cut off over the V/B range studied.

The derivation of the plots here was coordinated with work by D. B. Hanson (Ref. 2) for the two-dimensional case. Note that Hanson uses n , rather than s , for the BPF harmonic index, but we both use k for the vane passing frequency harmonic index. In Ref. 2, there is no radial mode index because there are no radial modes in two dimensions.

* Consistent with the convention in Volume 1 (Ref. 1), radial mode indices begin at 1. Standard practice in many other places is to use an index $\mu = n - 1$ so that counting begins at 0.

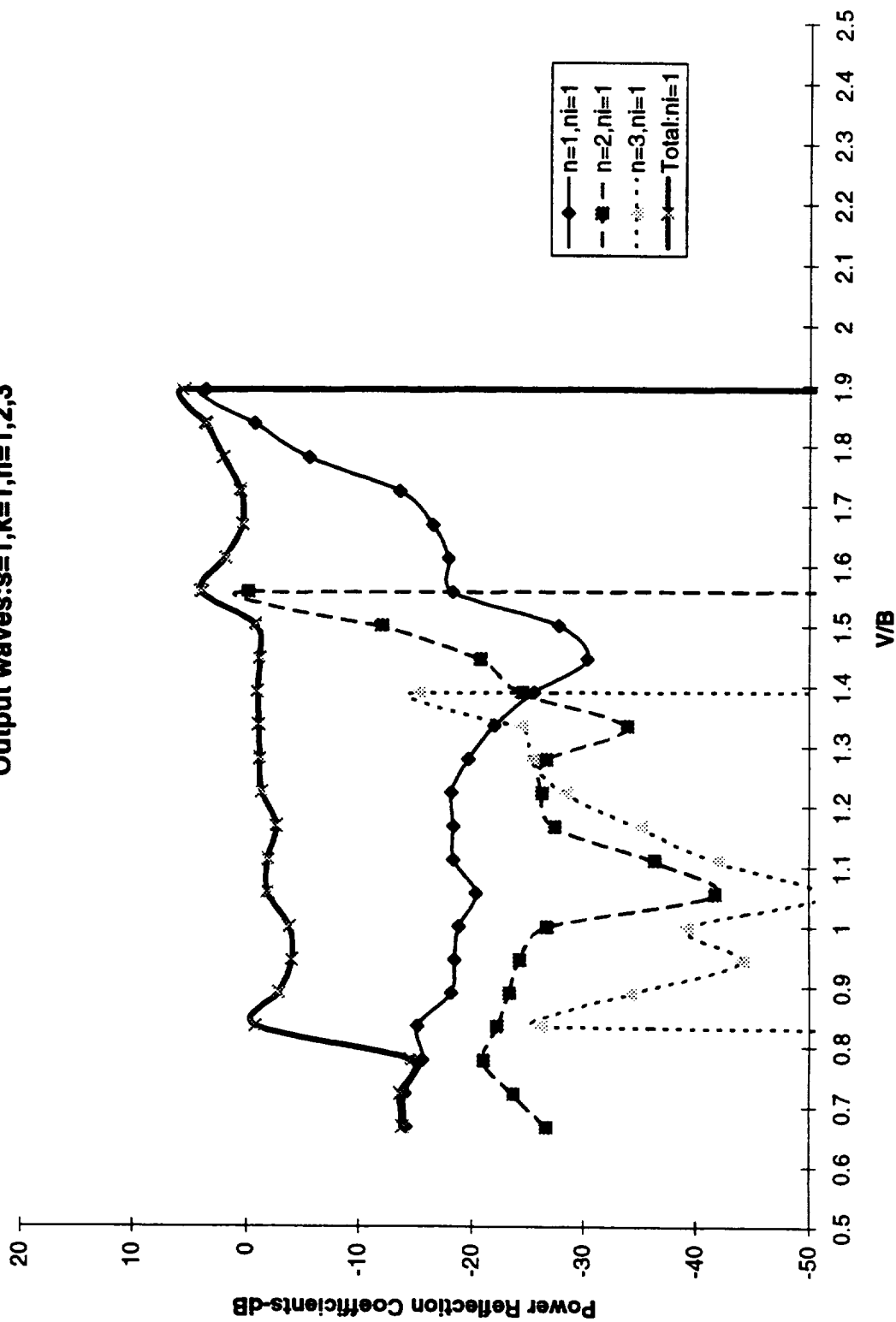
1.1 Scattering Plots for High Speed Case

Curves for the high speed case are presented in this section. They are discussed in Chapter 3 of Volume 1 of this report (Ref. 1).

Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

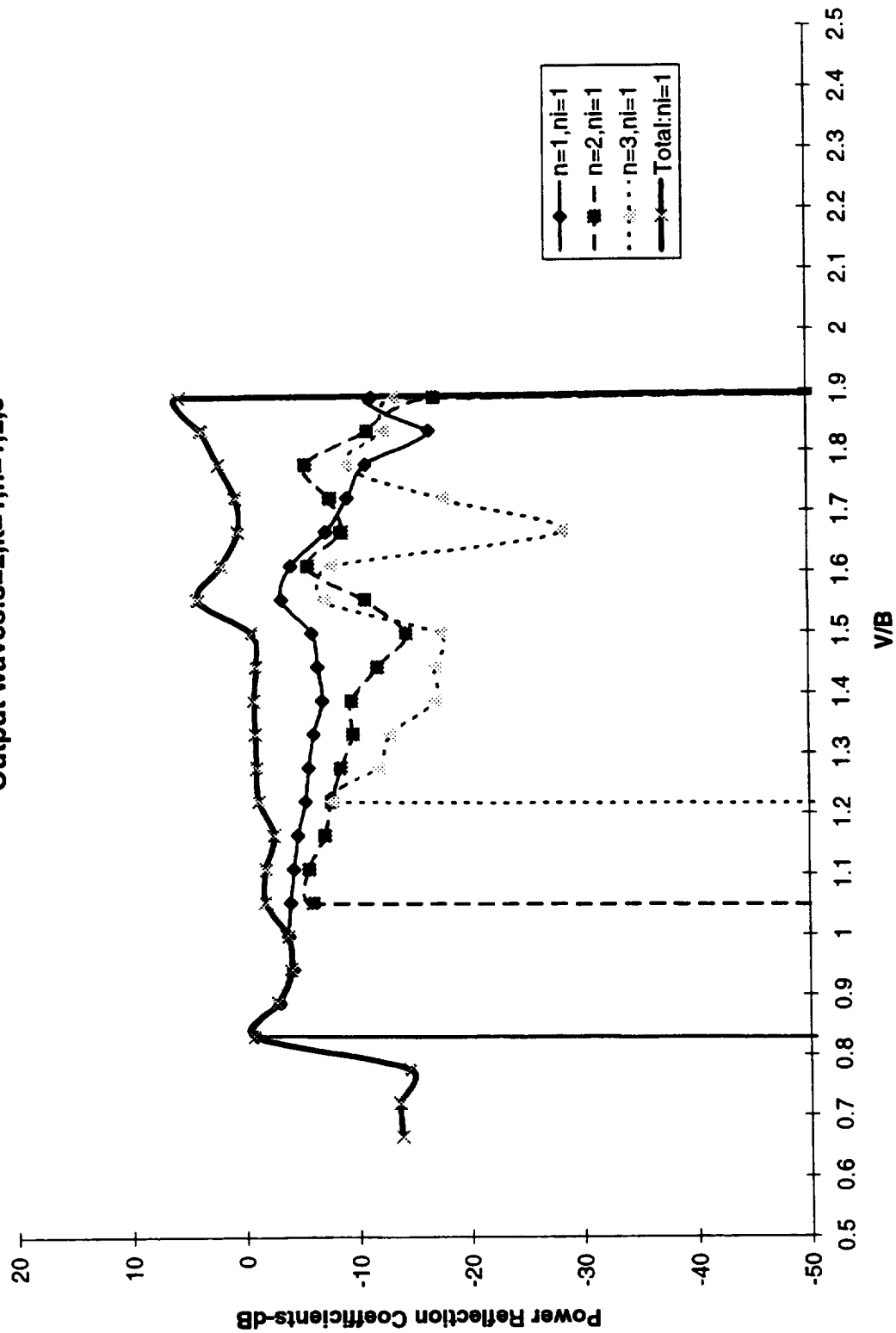
Output waves: $s=1, k=1, n=1, 2, 3$



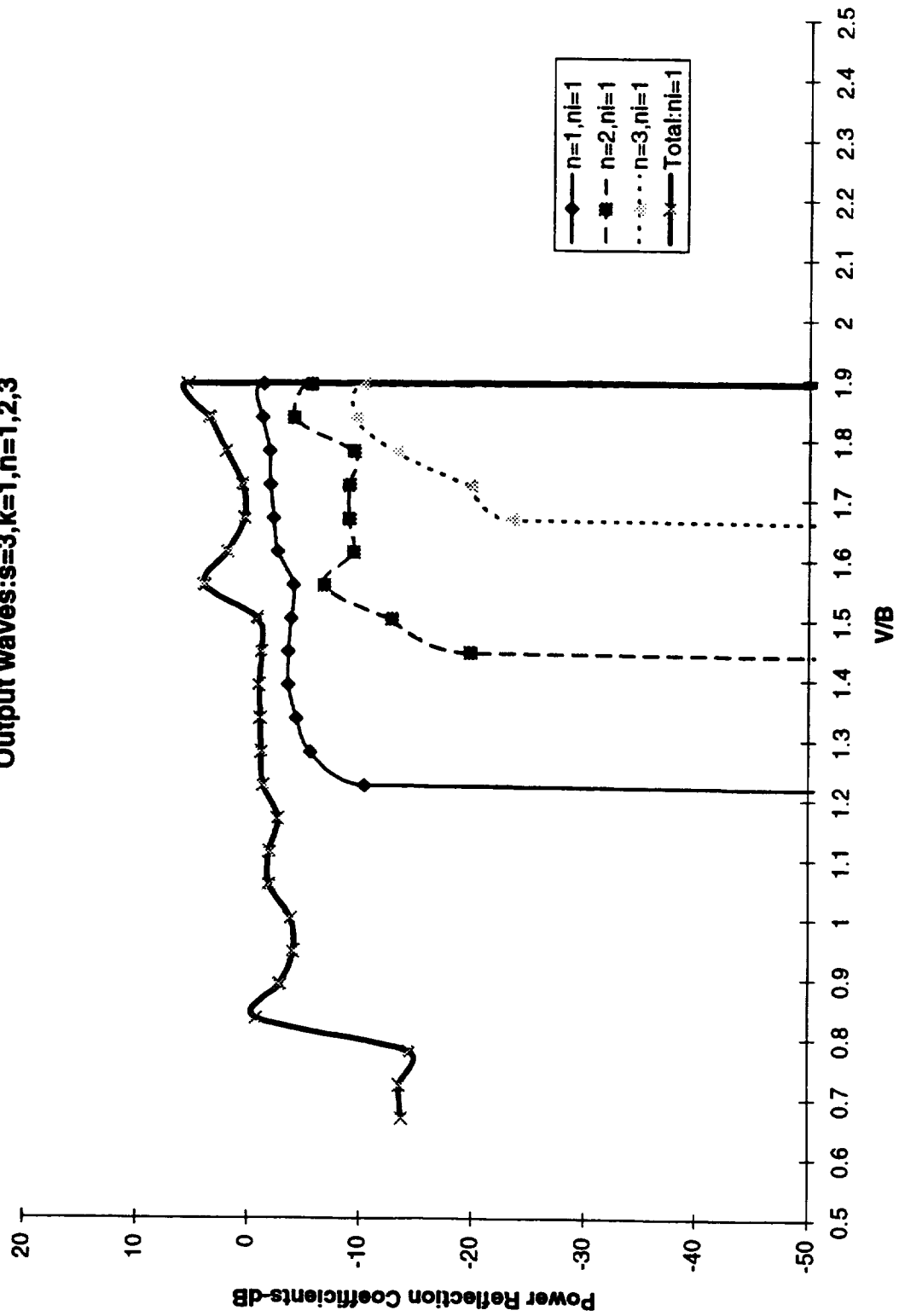
Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

Output waves: $s=2, k=1, n=1, 2, 3$



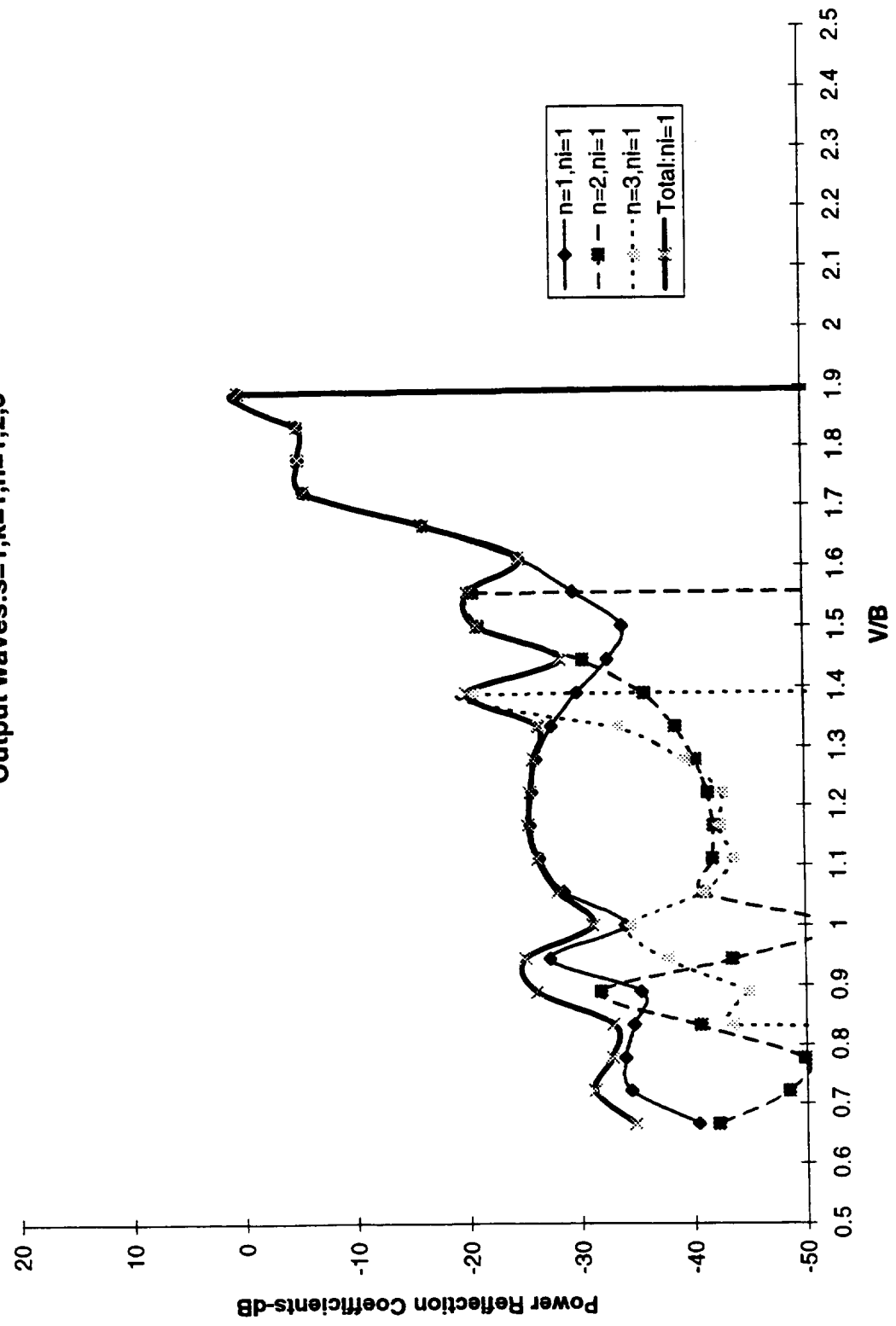
Rotor Reflection-High Speed Case
Input wave: $s_l=1, k_l=1, n_l=1$
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

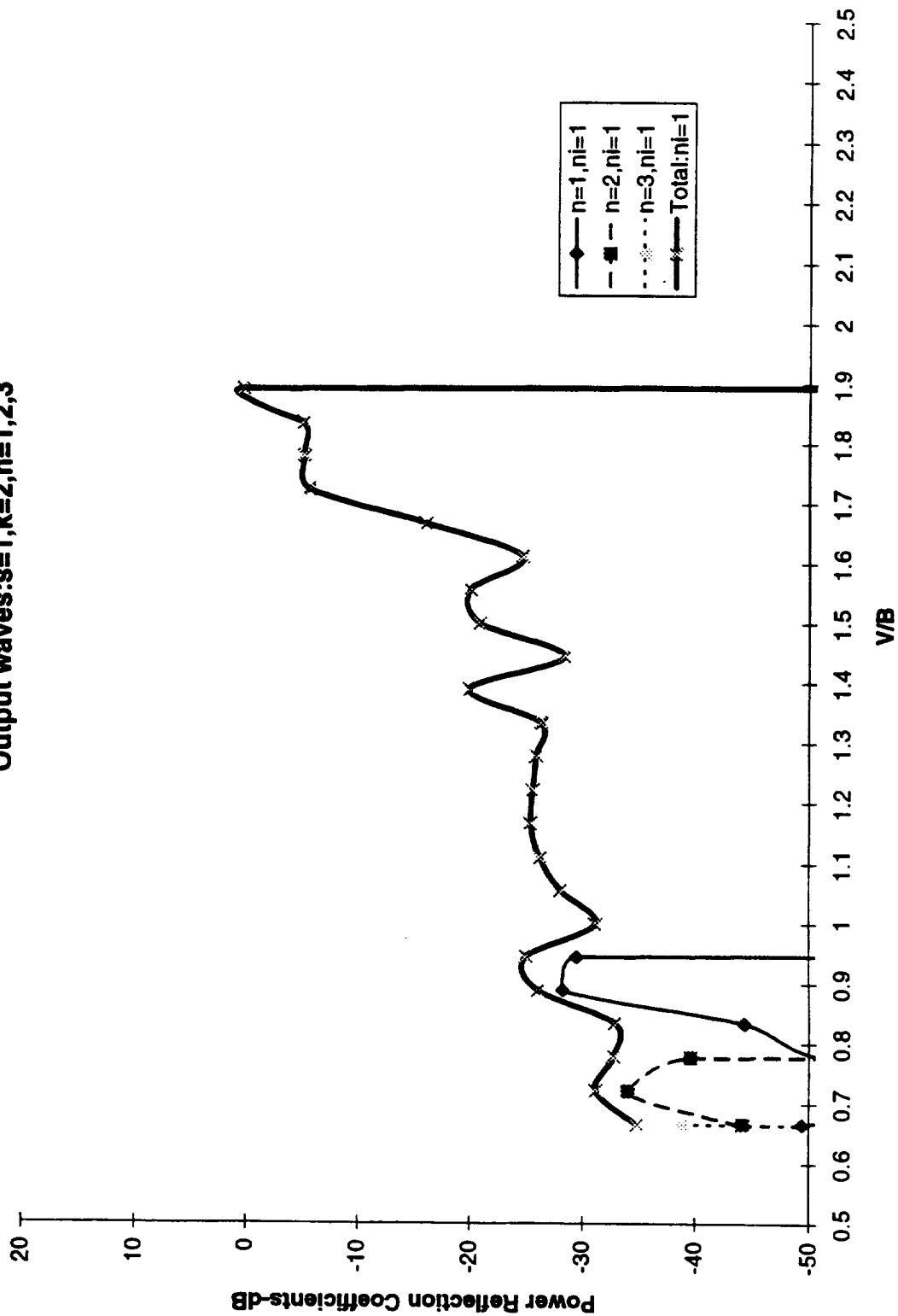
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_l=1, k_l=1, n_l=1$

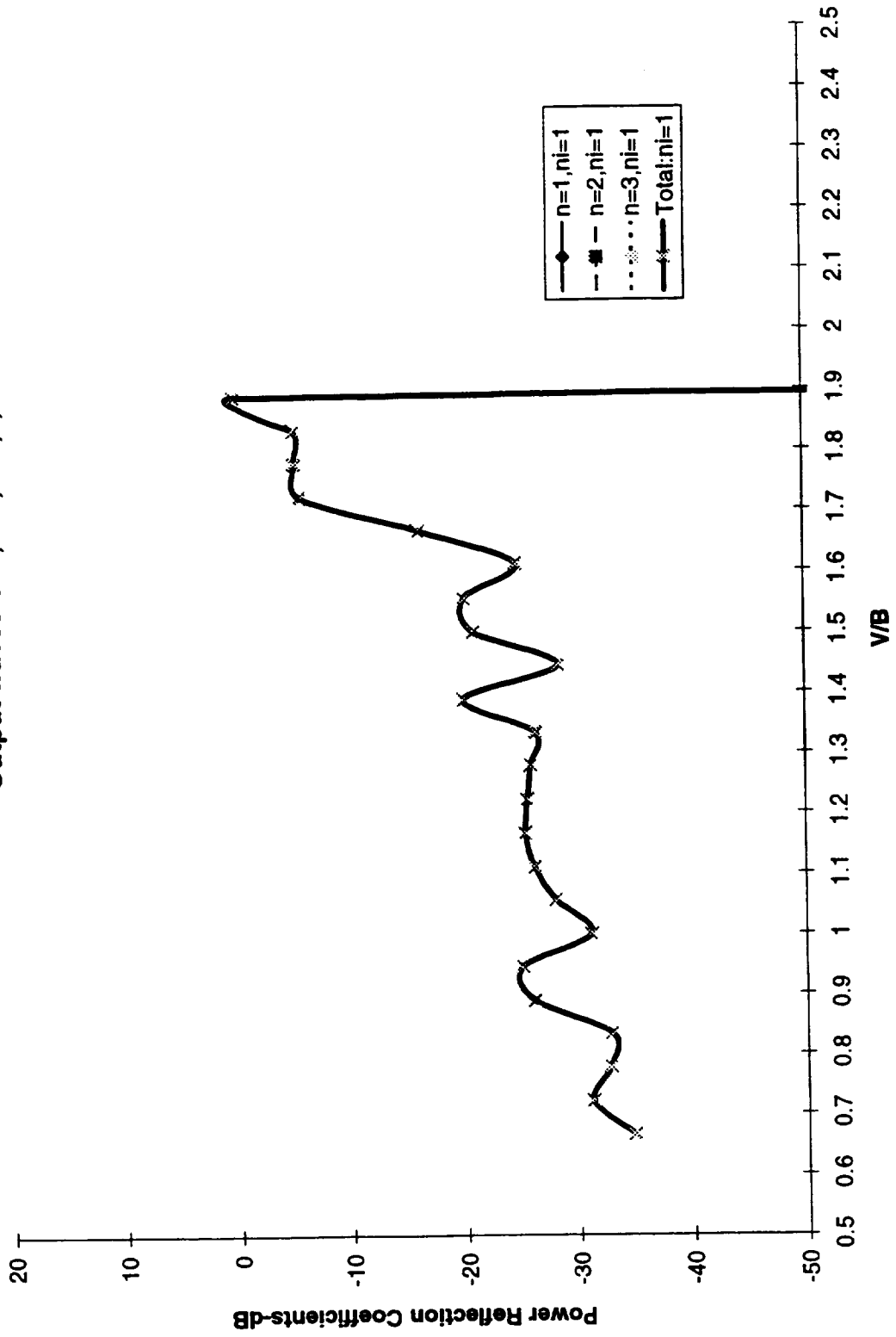
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

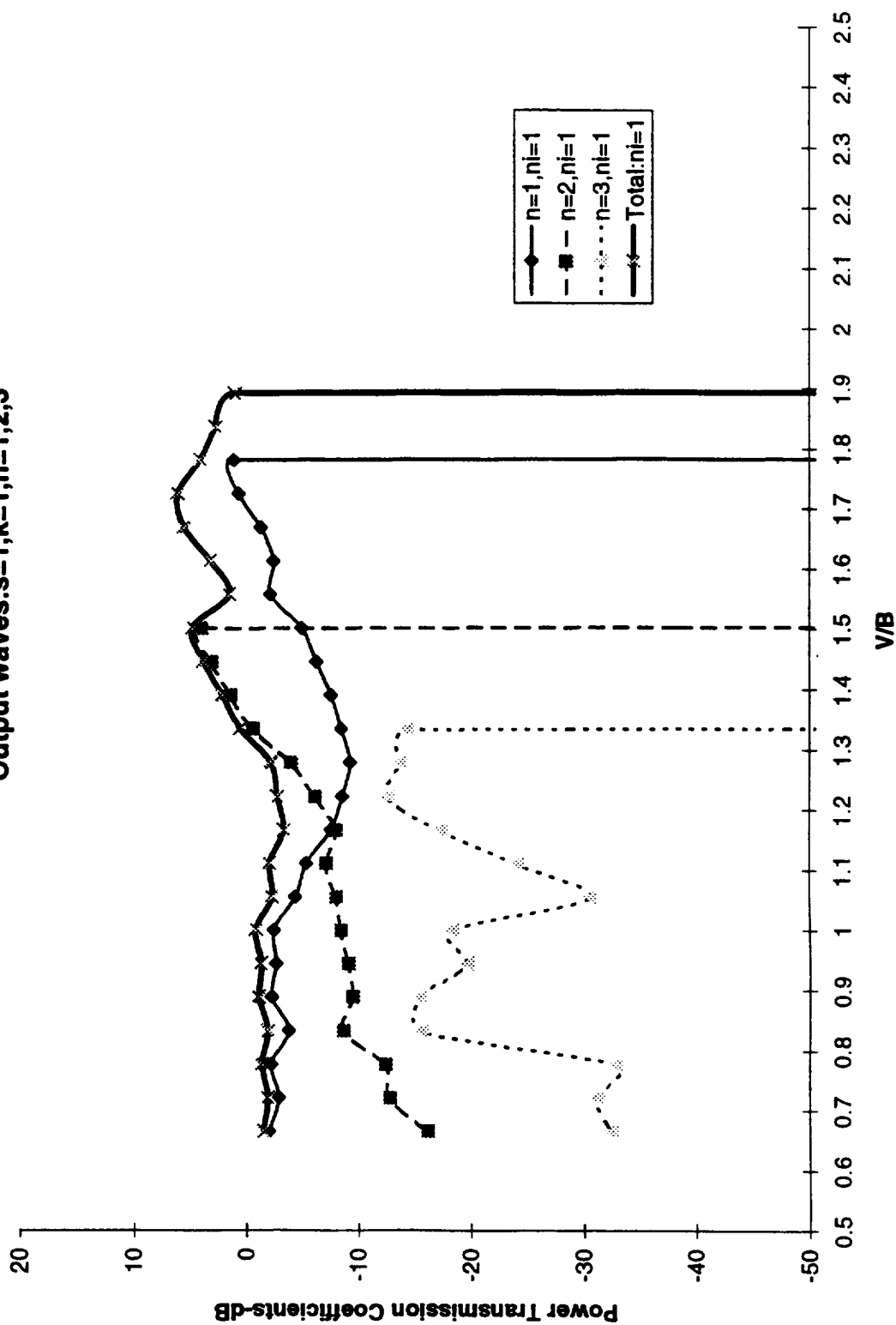
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_l=1, k_l=1, n_l=1$

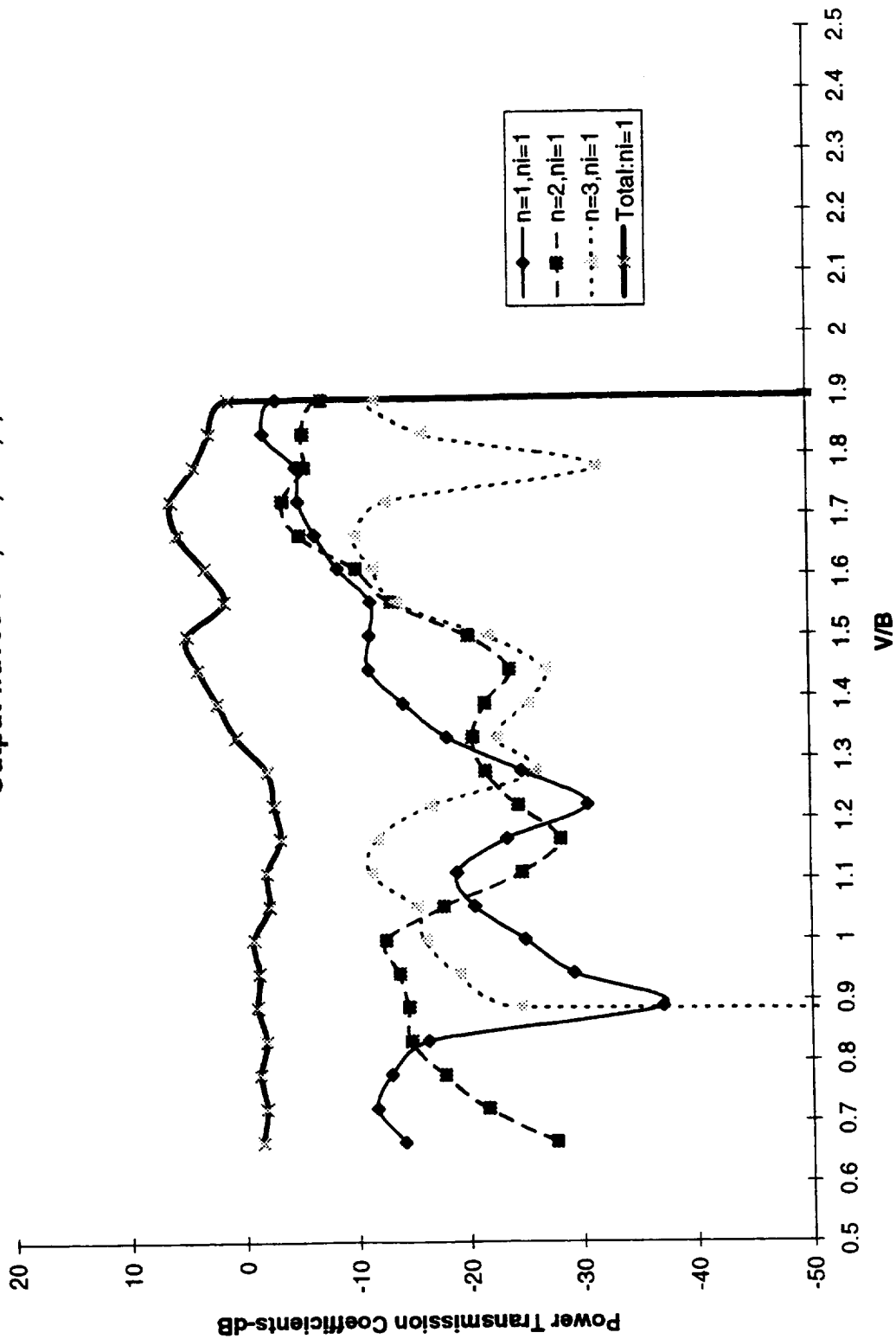
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

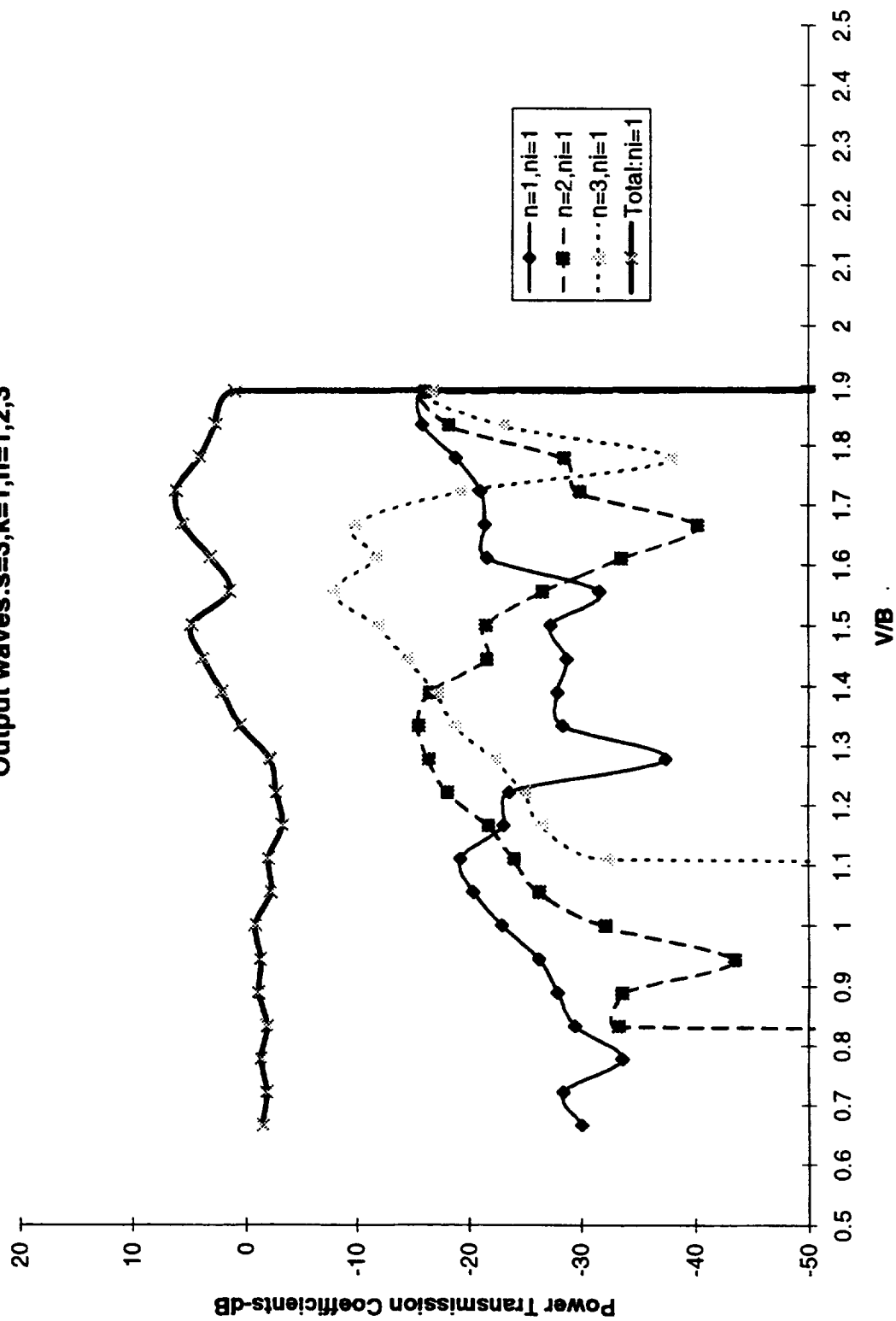
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

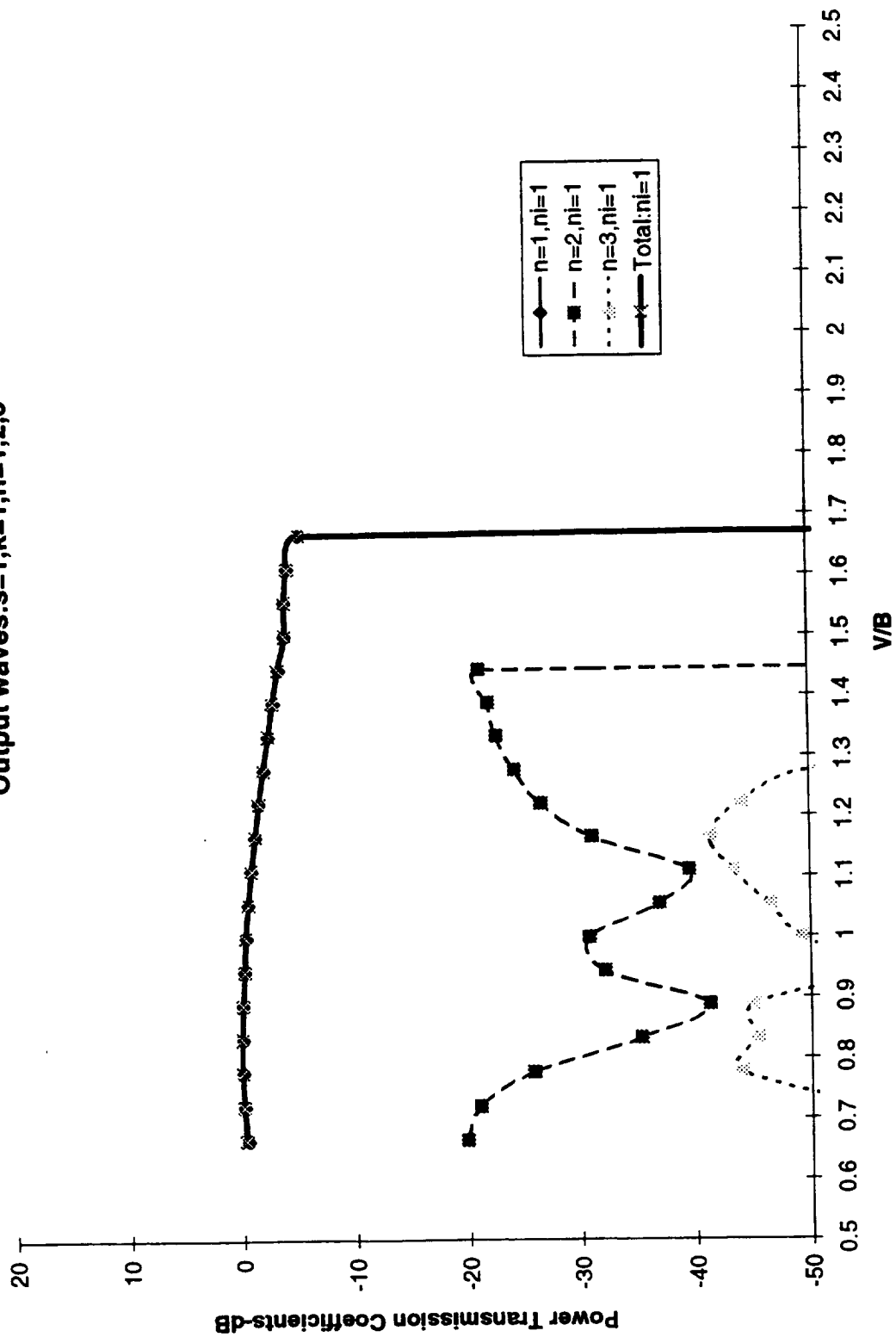
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

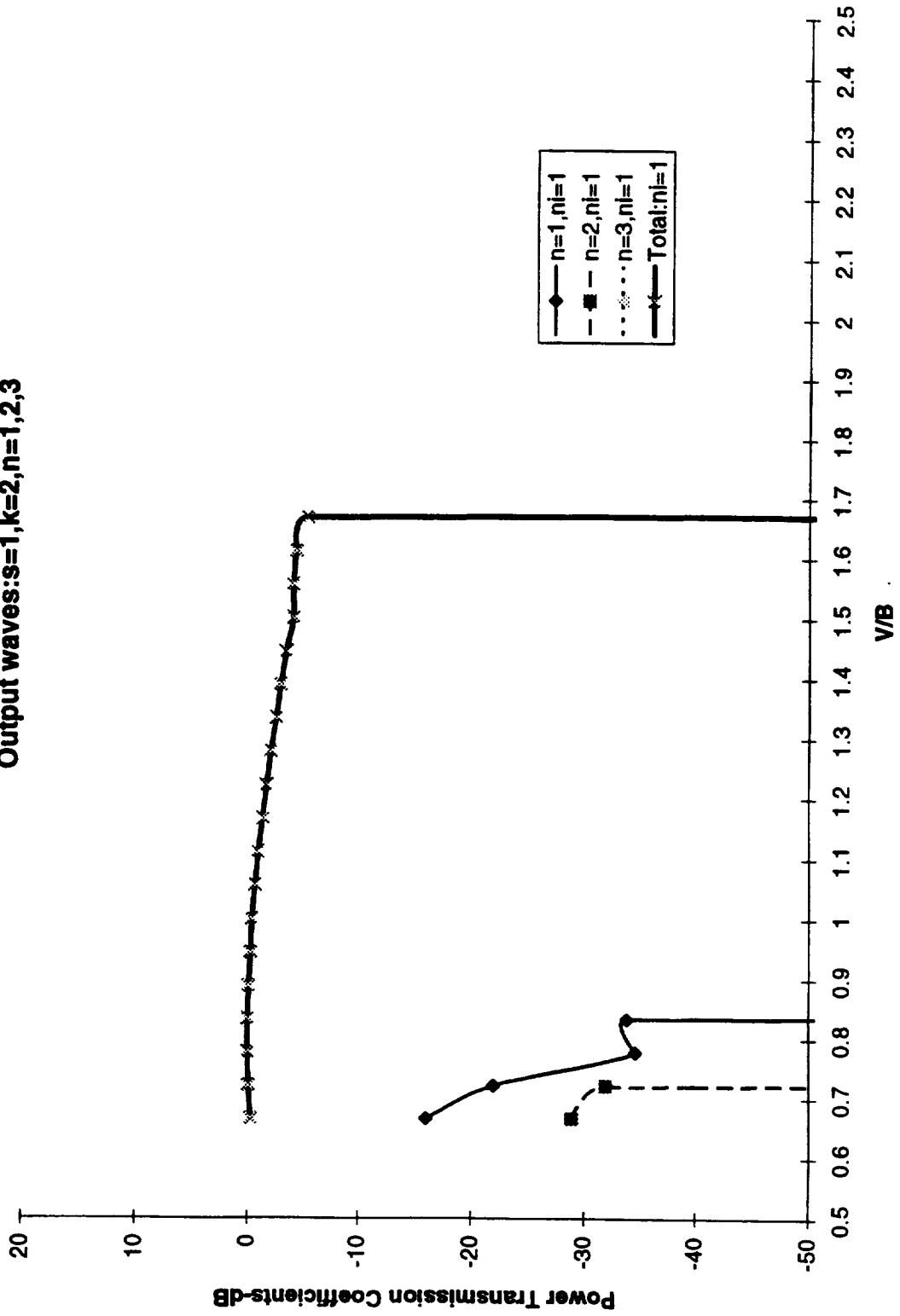
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_l=1, k_l=1, n_l=1$

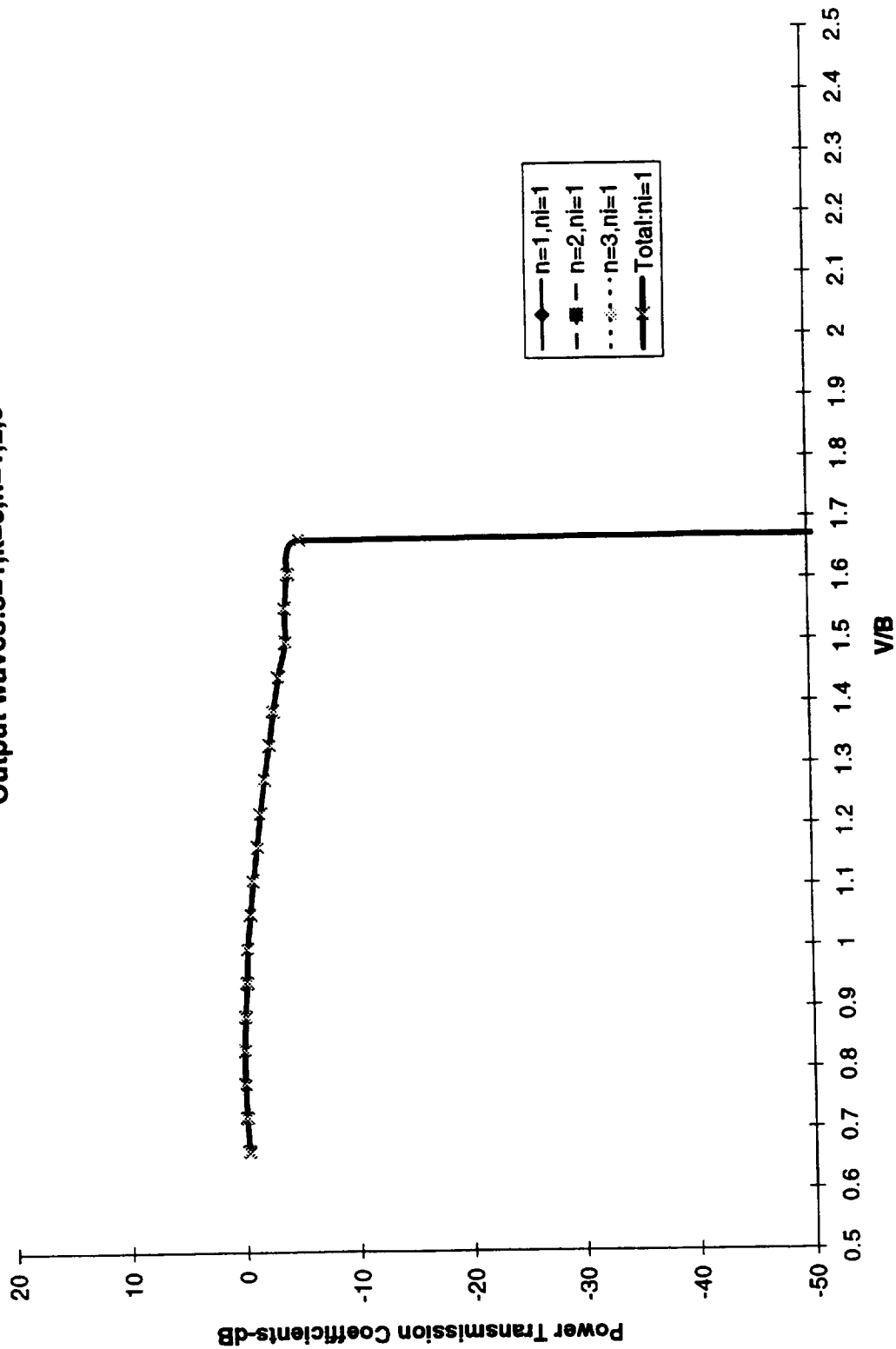
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

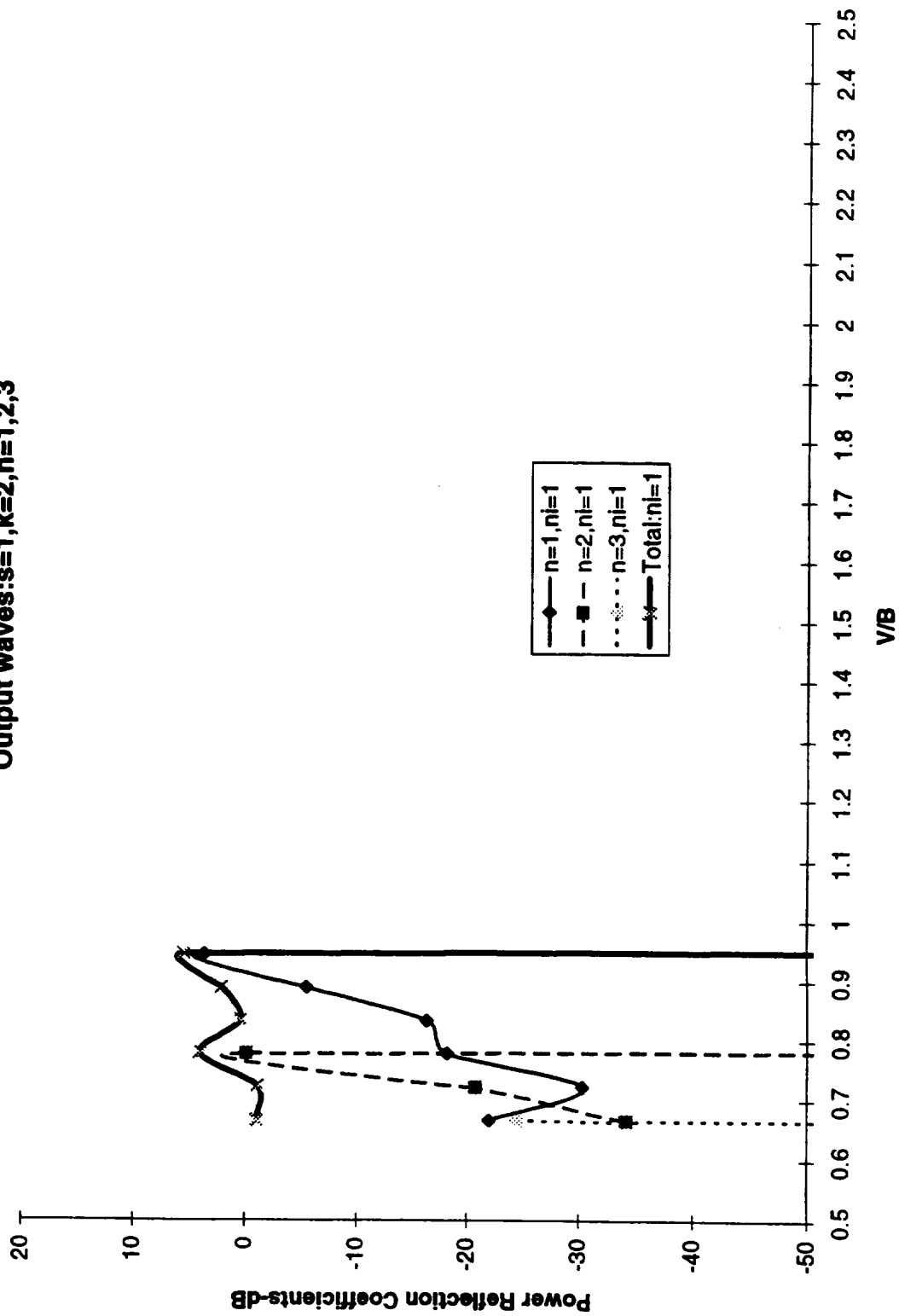
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

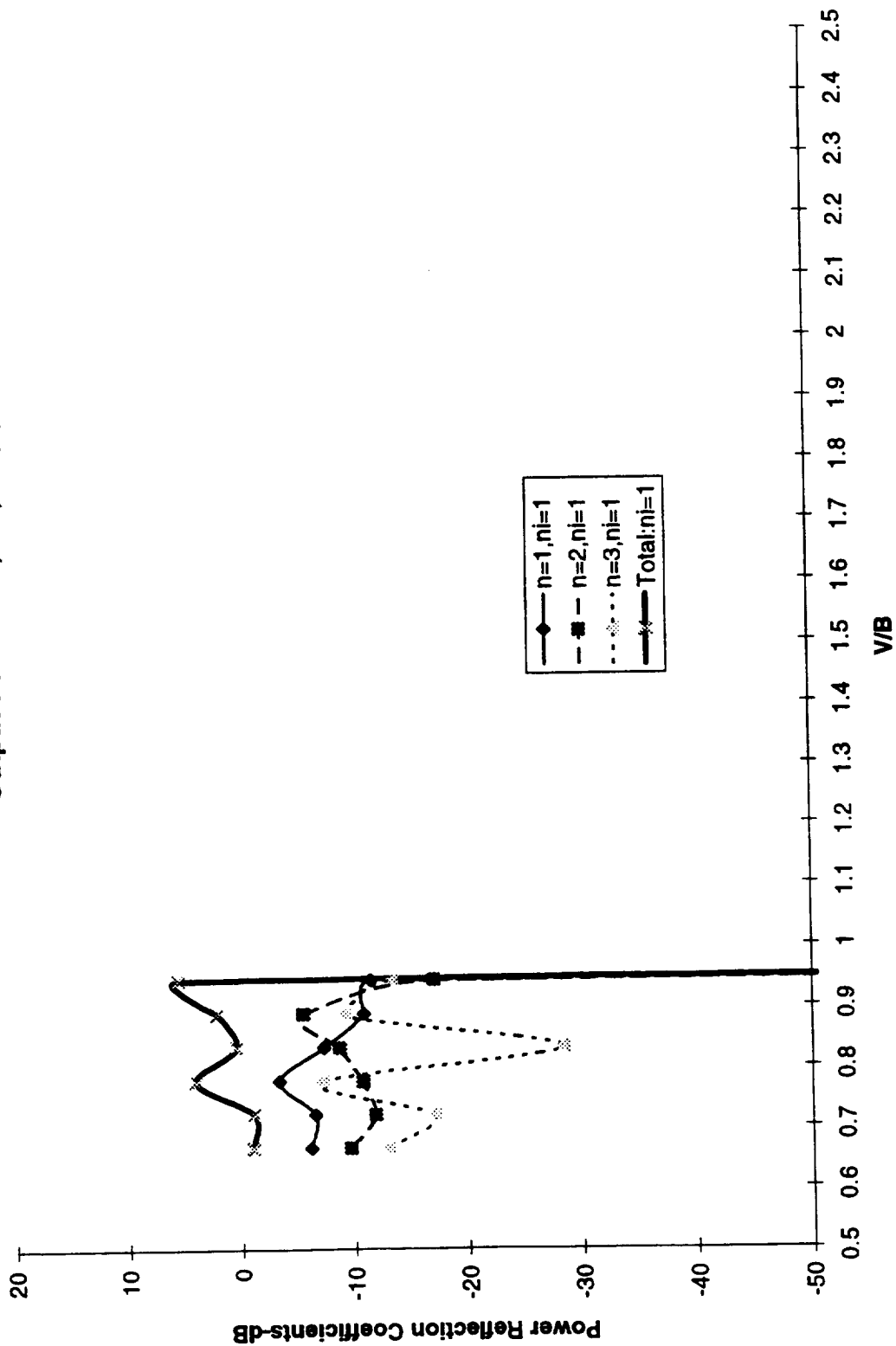
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_l=1, k_l=2, n_l=1$

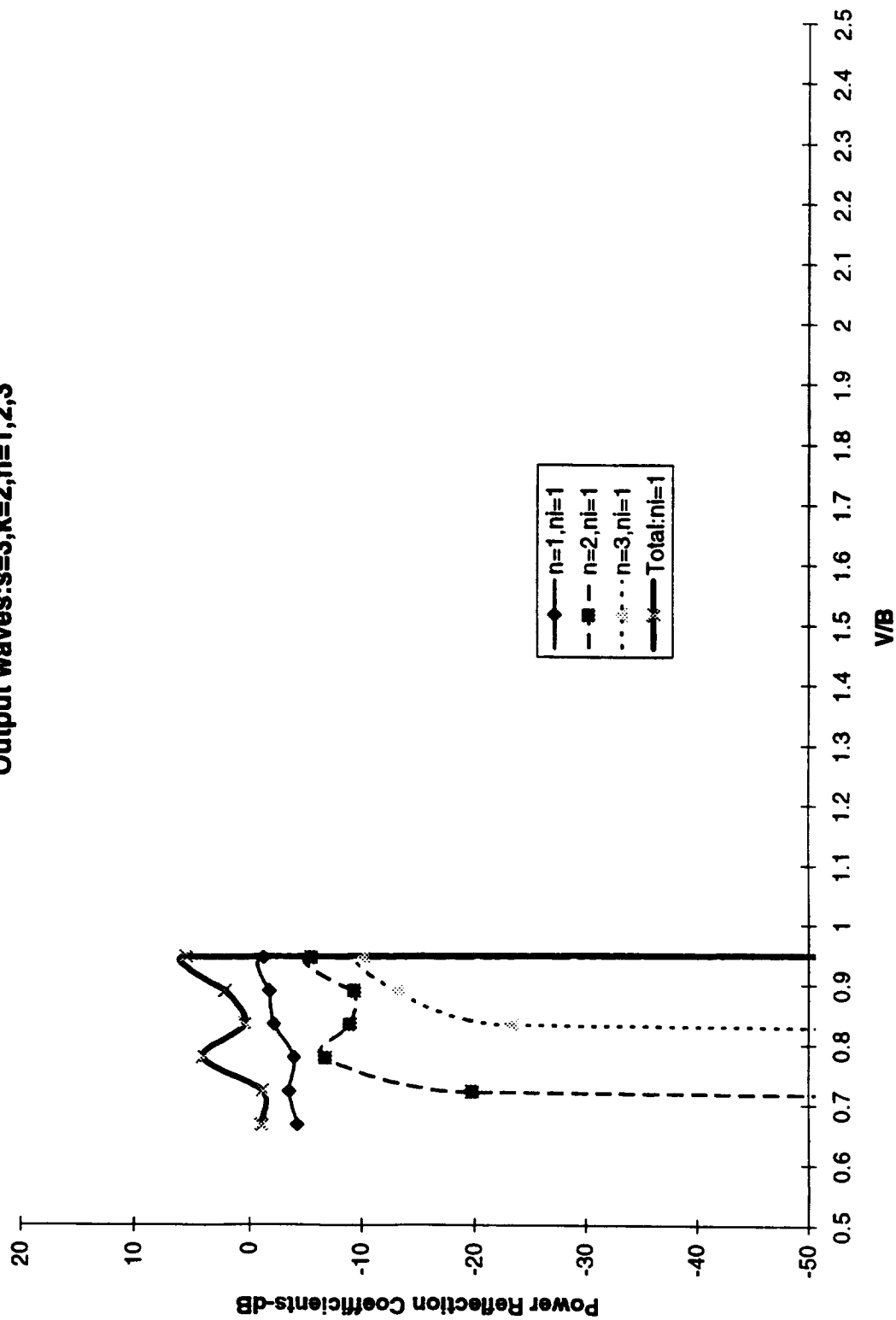
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

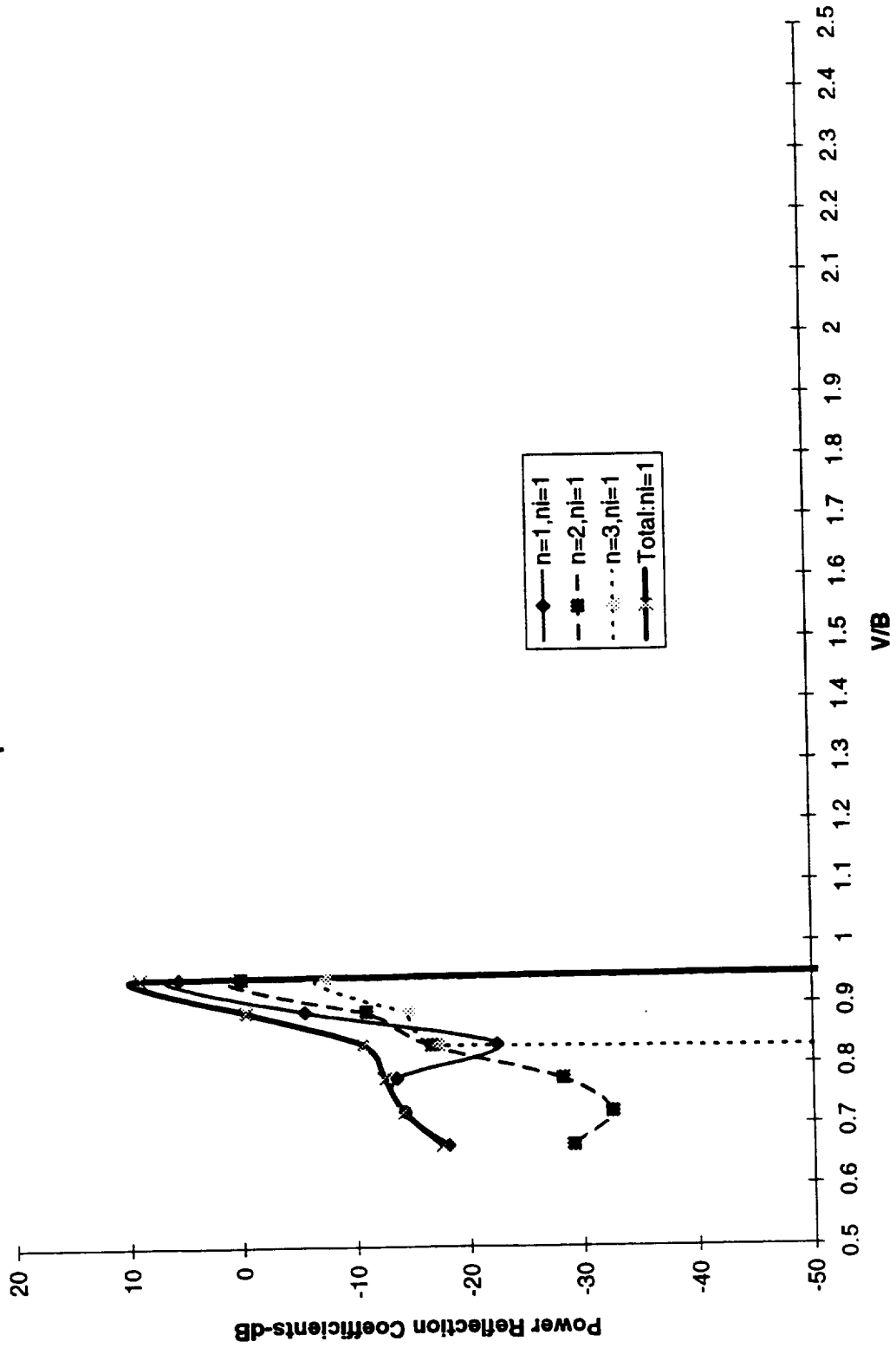
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

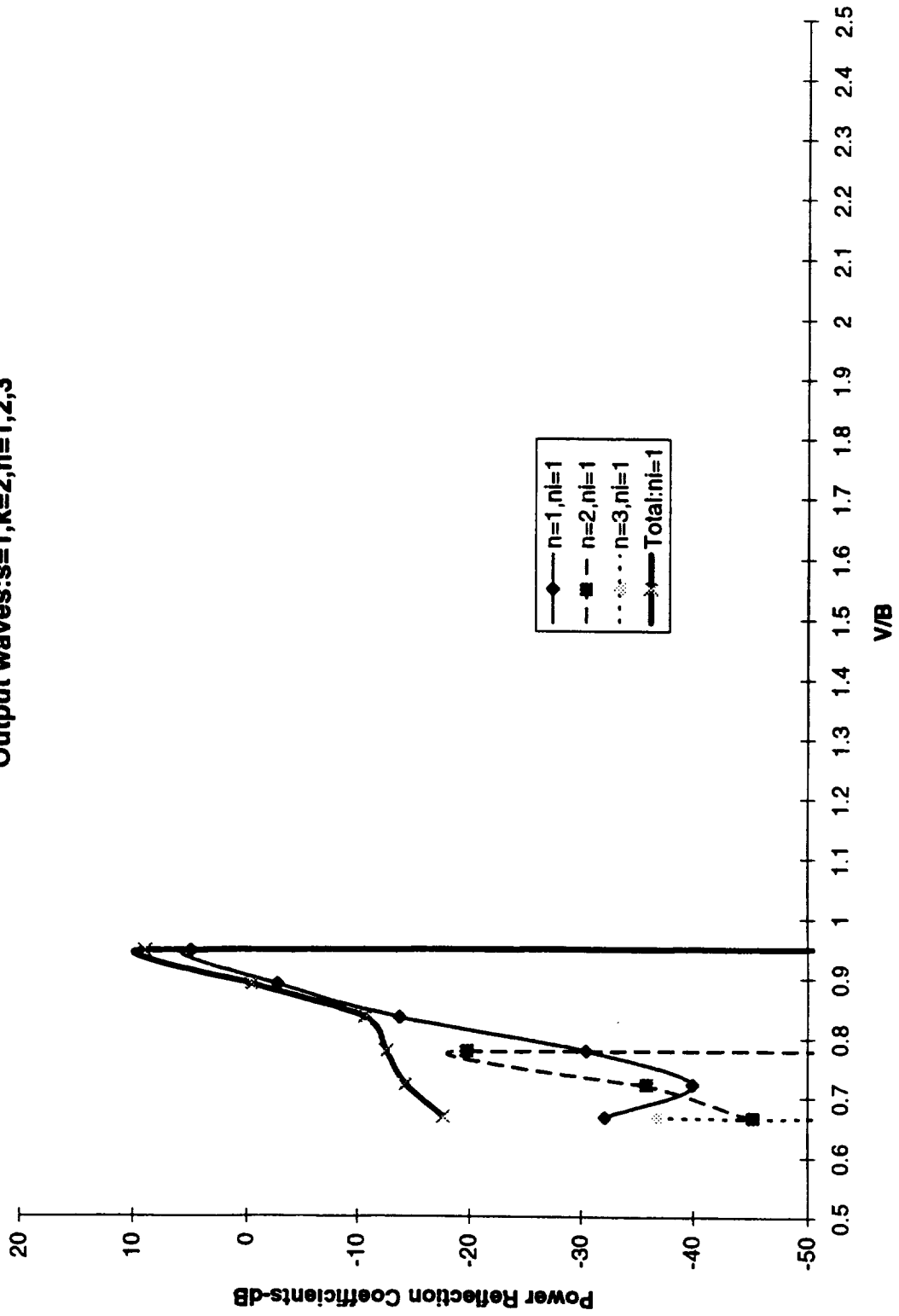
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

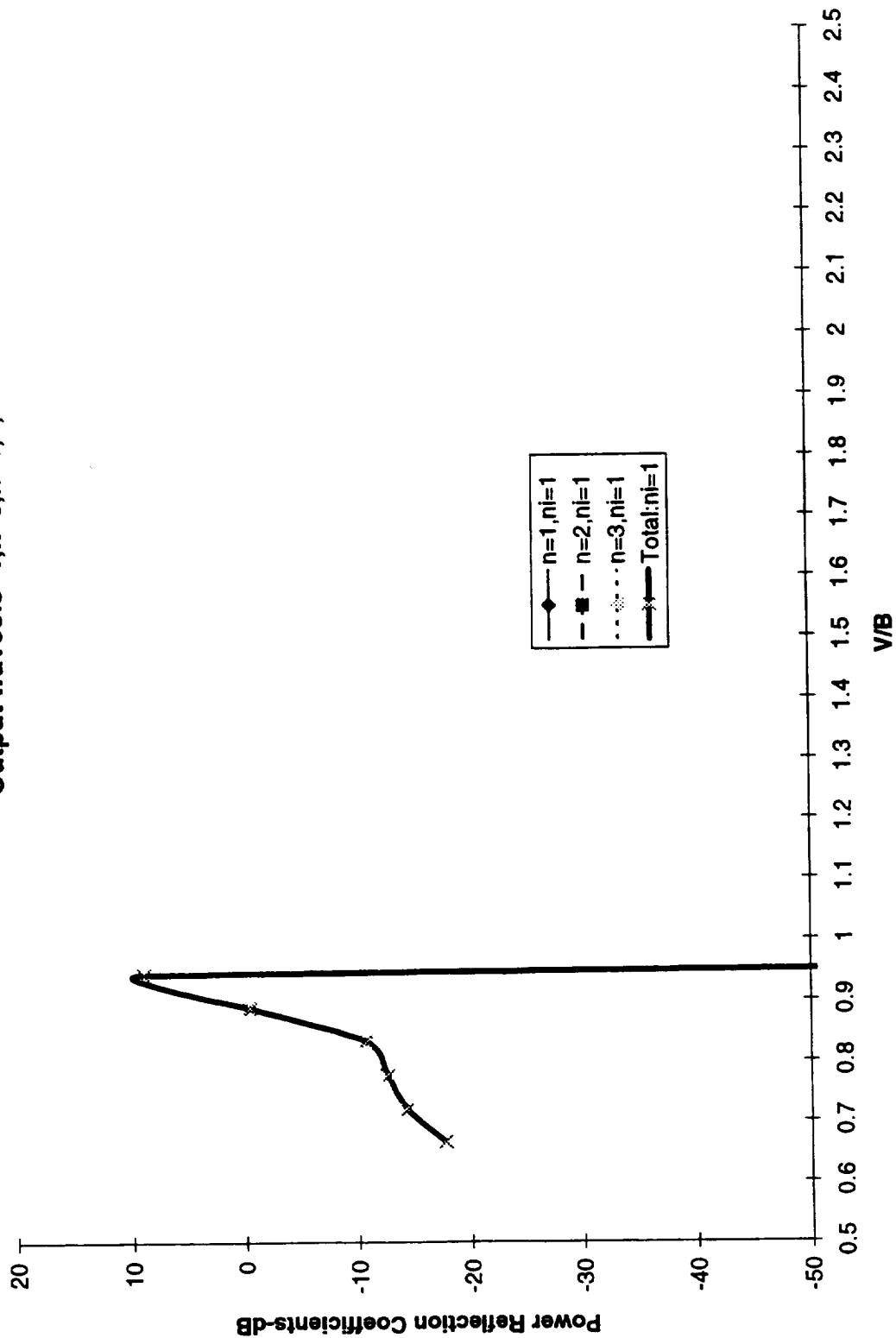
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

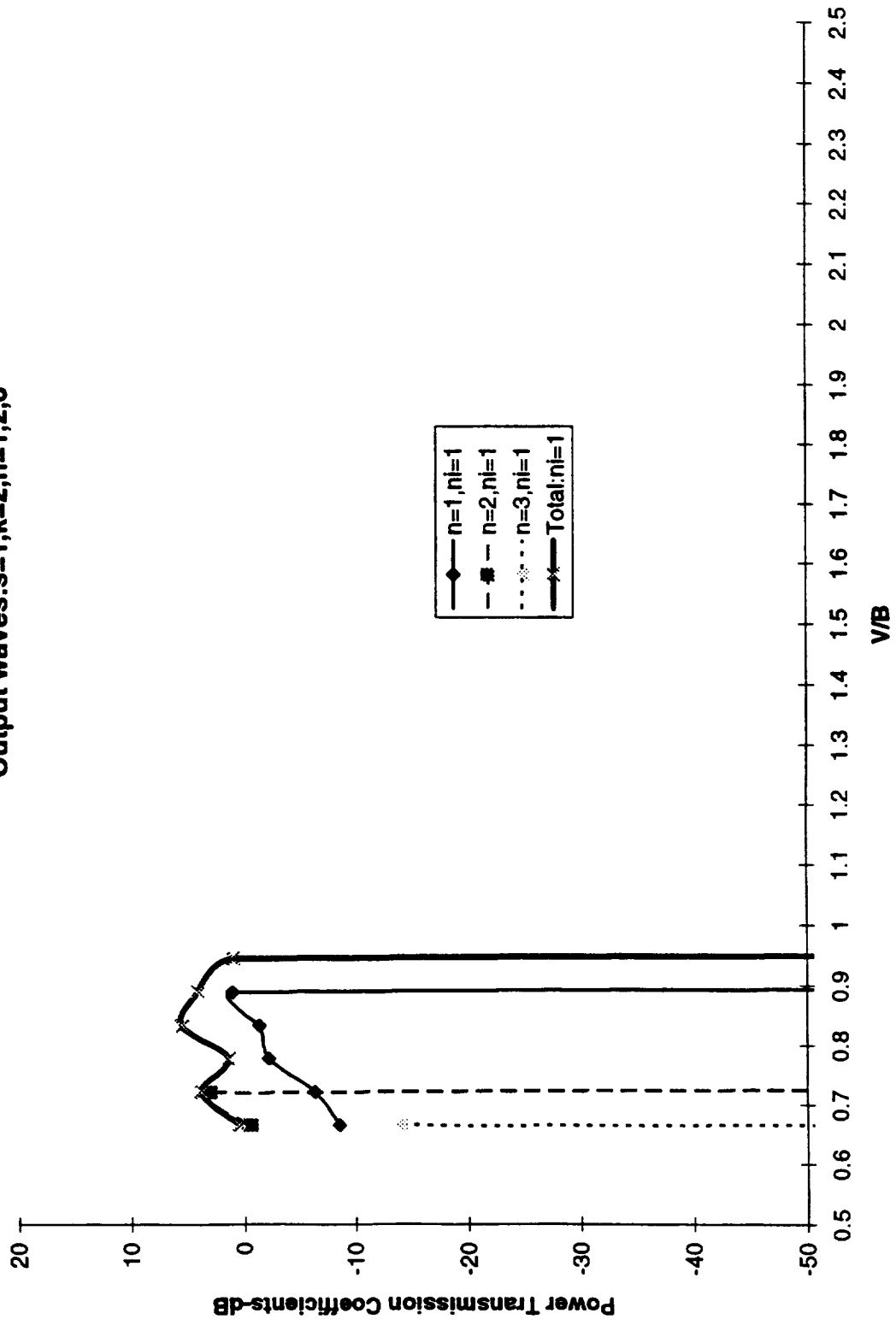
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

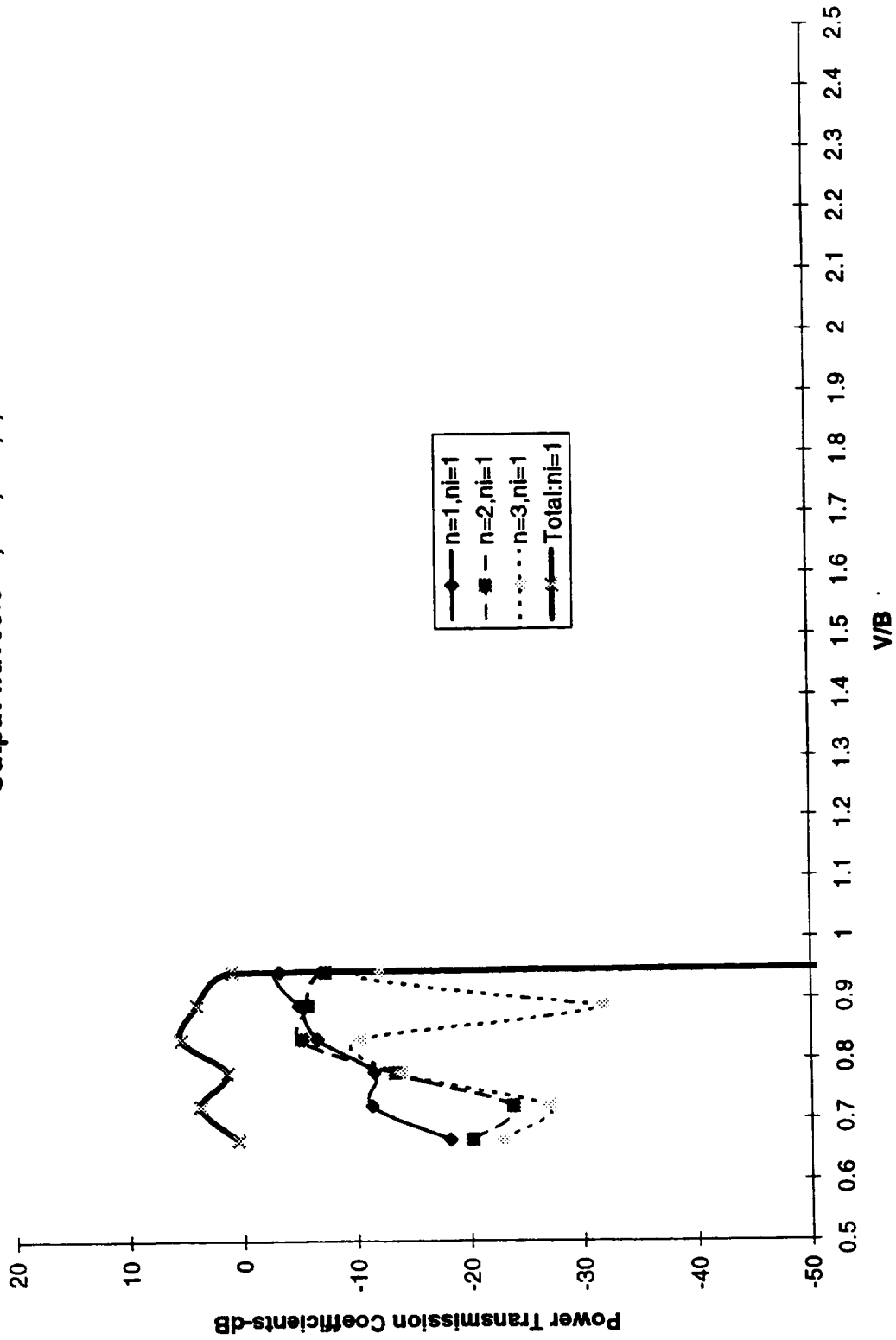
Output waves: $s=1, k=2, n=1, 2, 3$



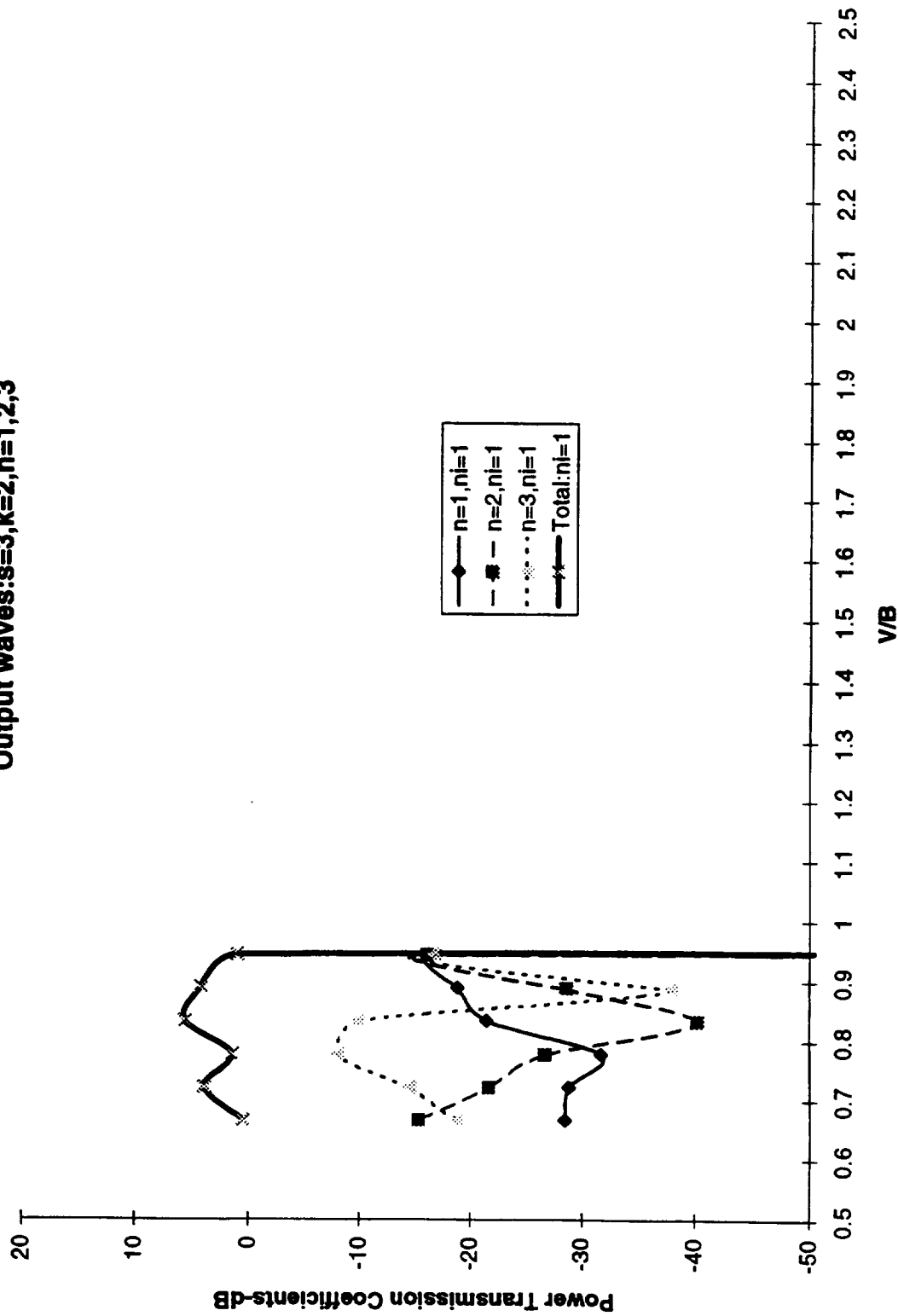
Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

Output waves: $s=2, k=2, n=1, 2, 3$



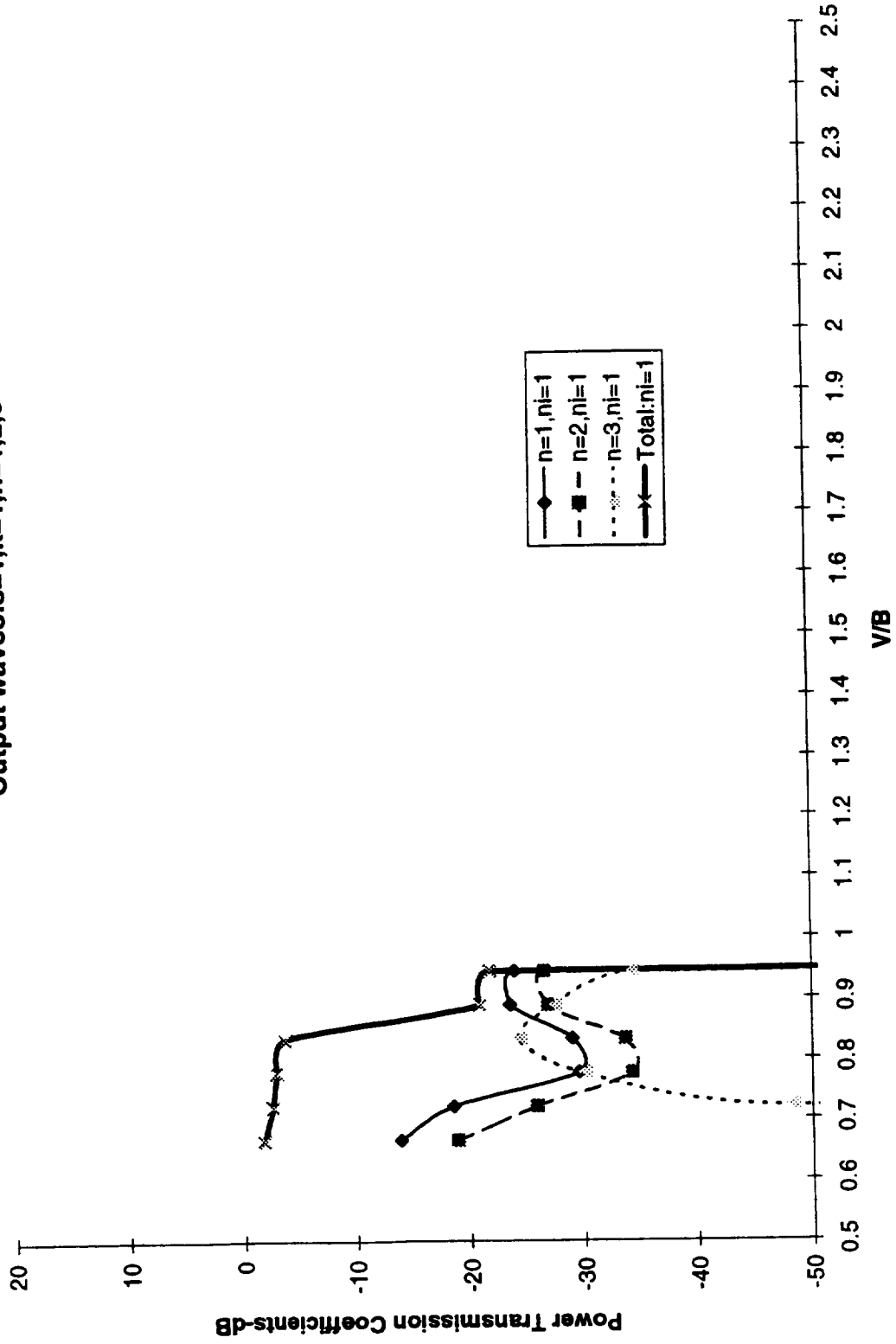
Rotor Transmission-High Speed Case
Input wave: $s_i=1, k_i=2, n_i=1$
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

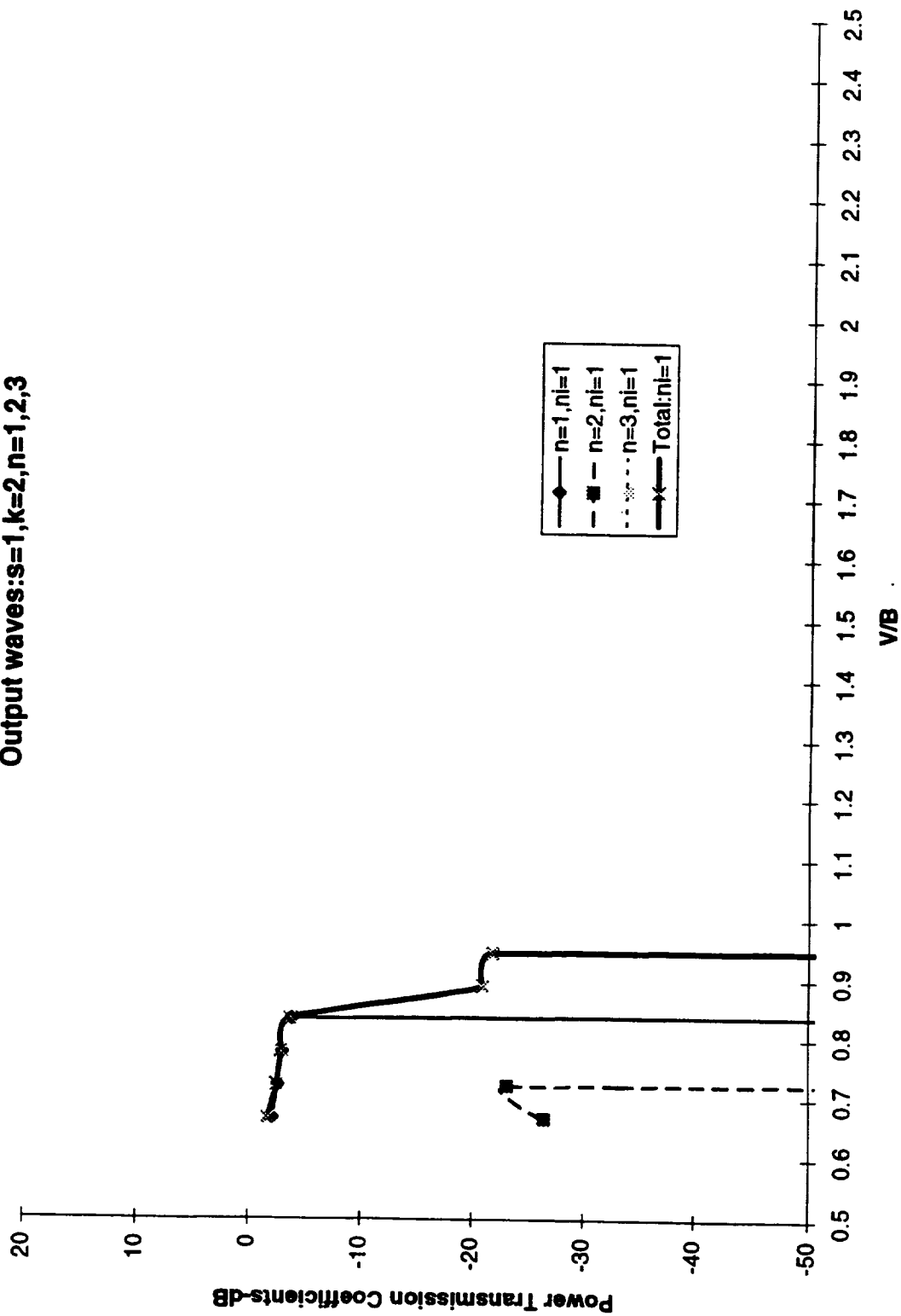
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_l=1, k_l=2, n_l=1$

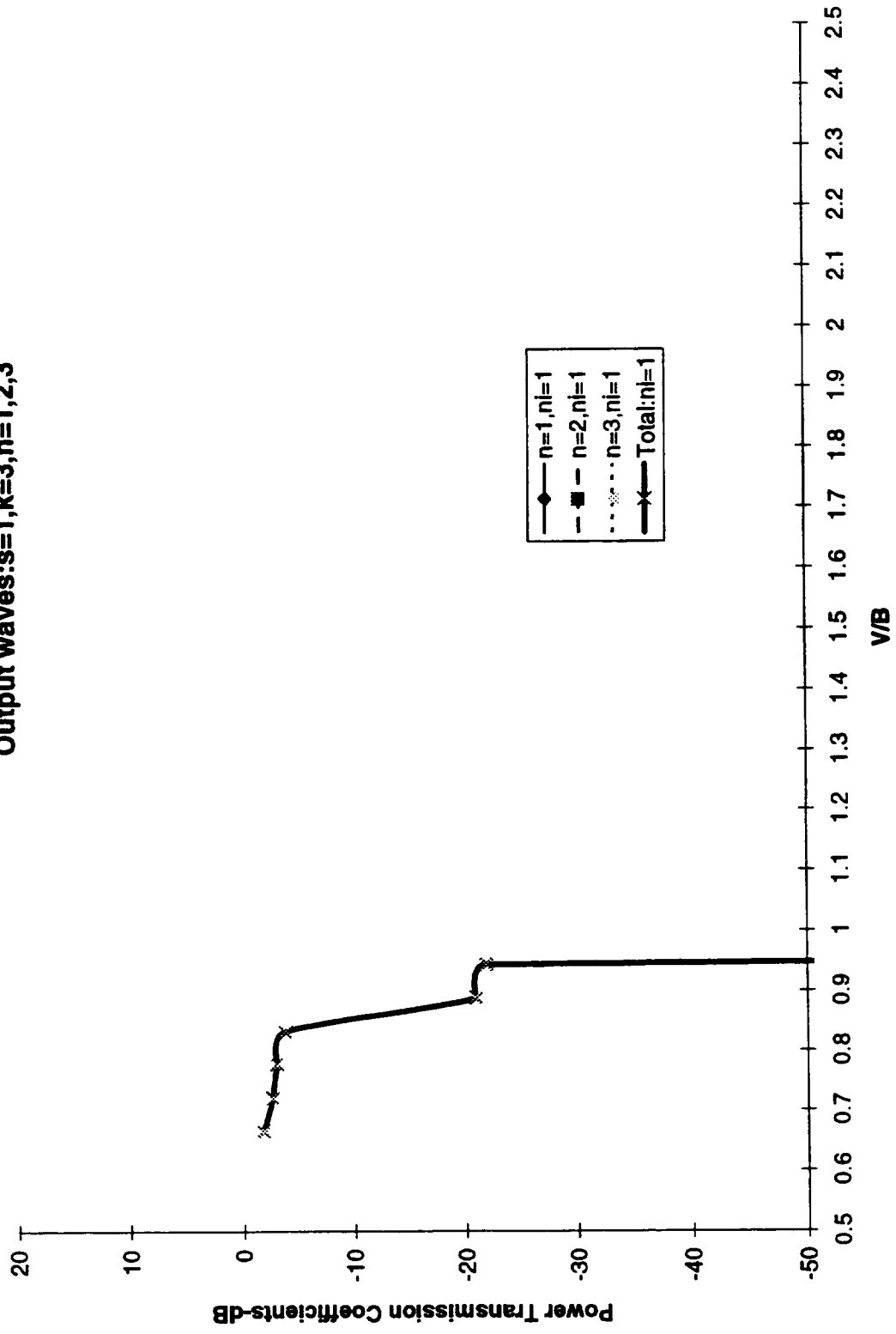
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

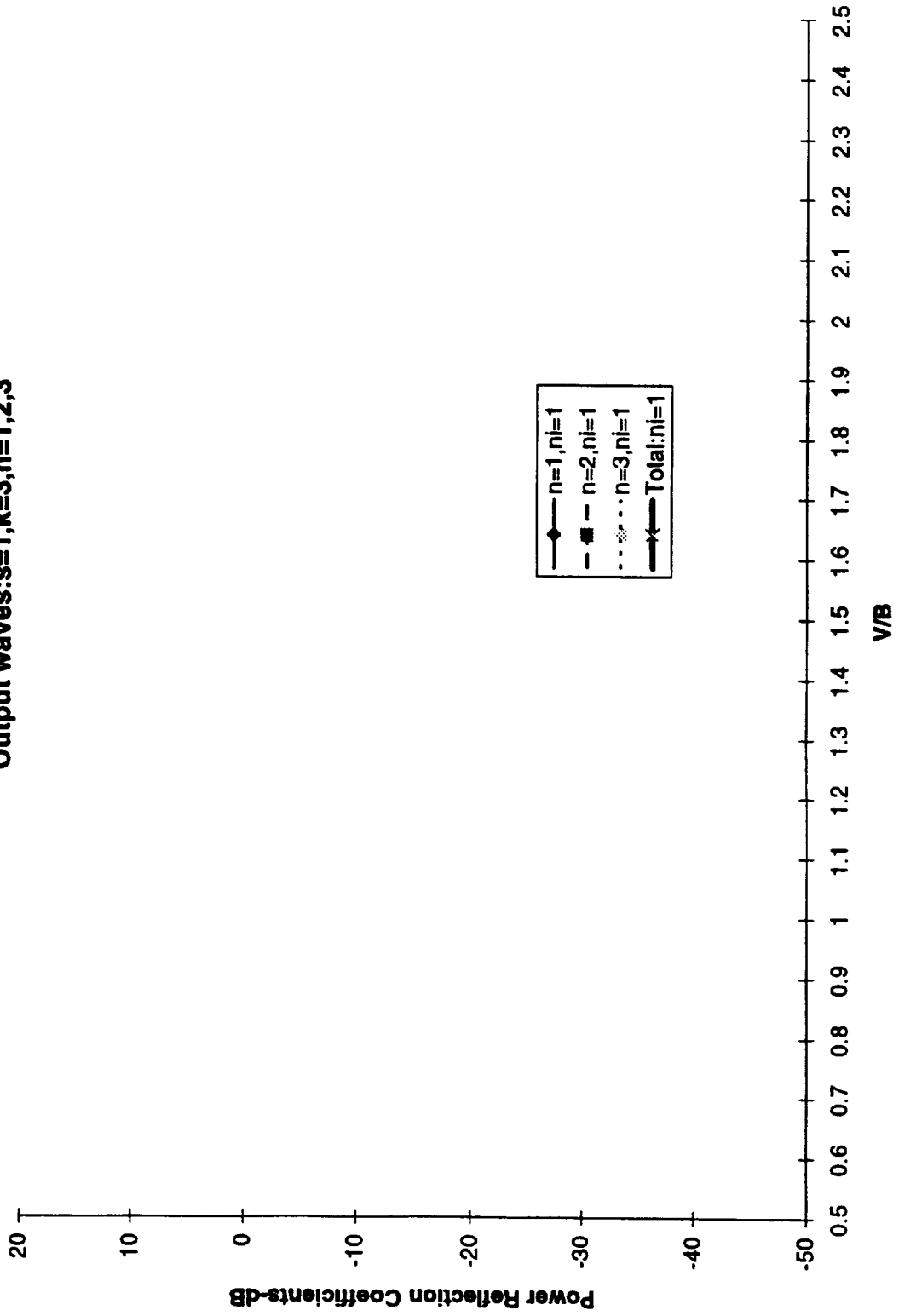
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

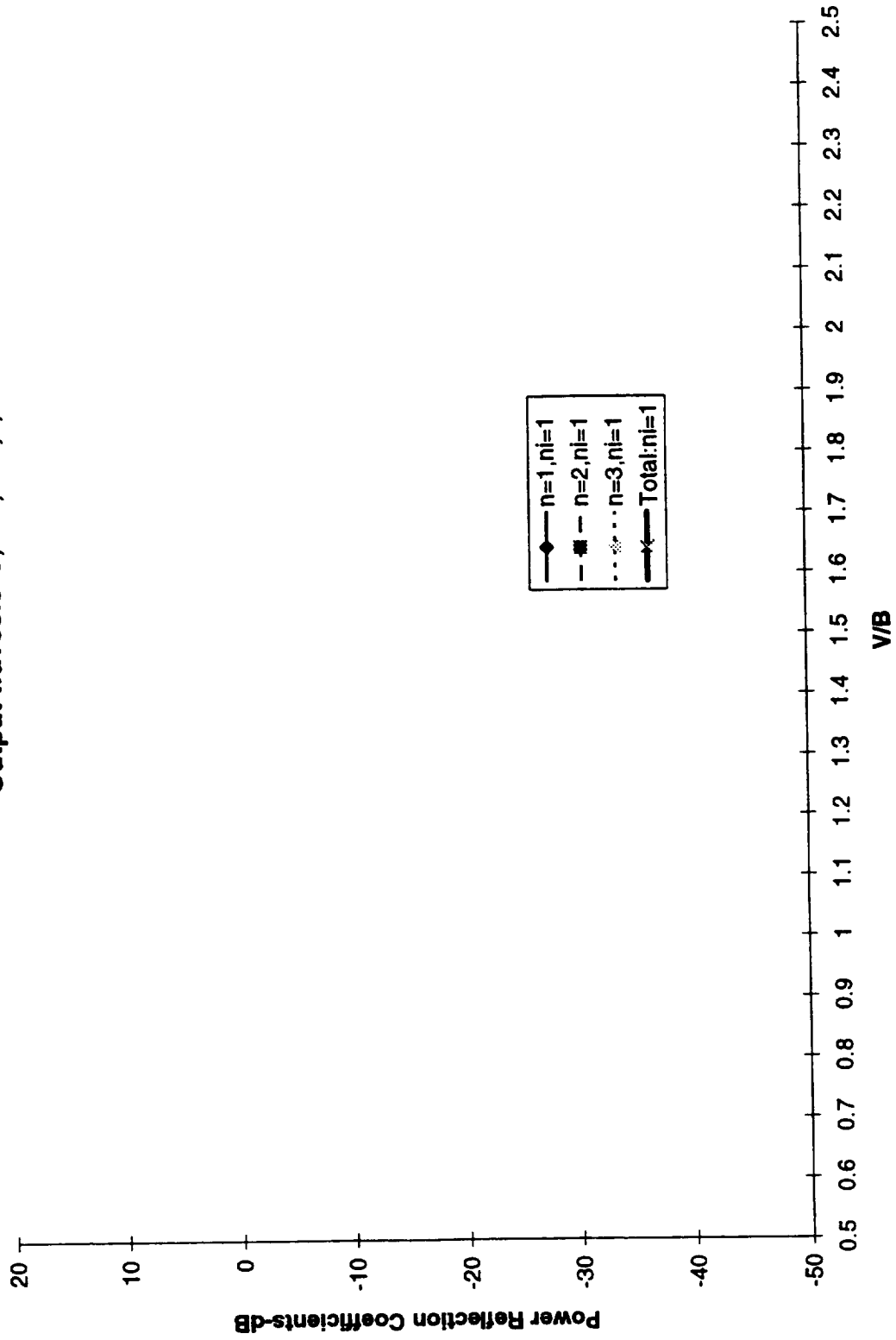
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

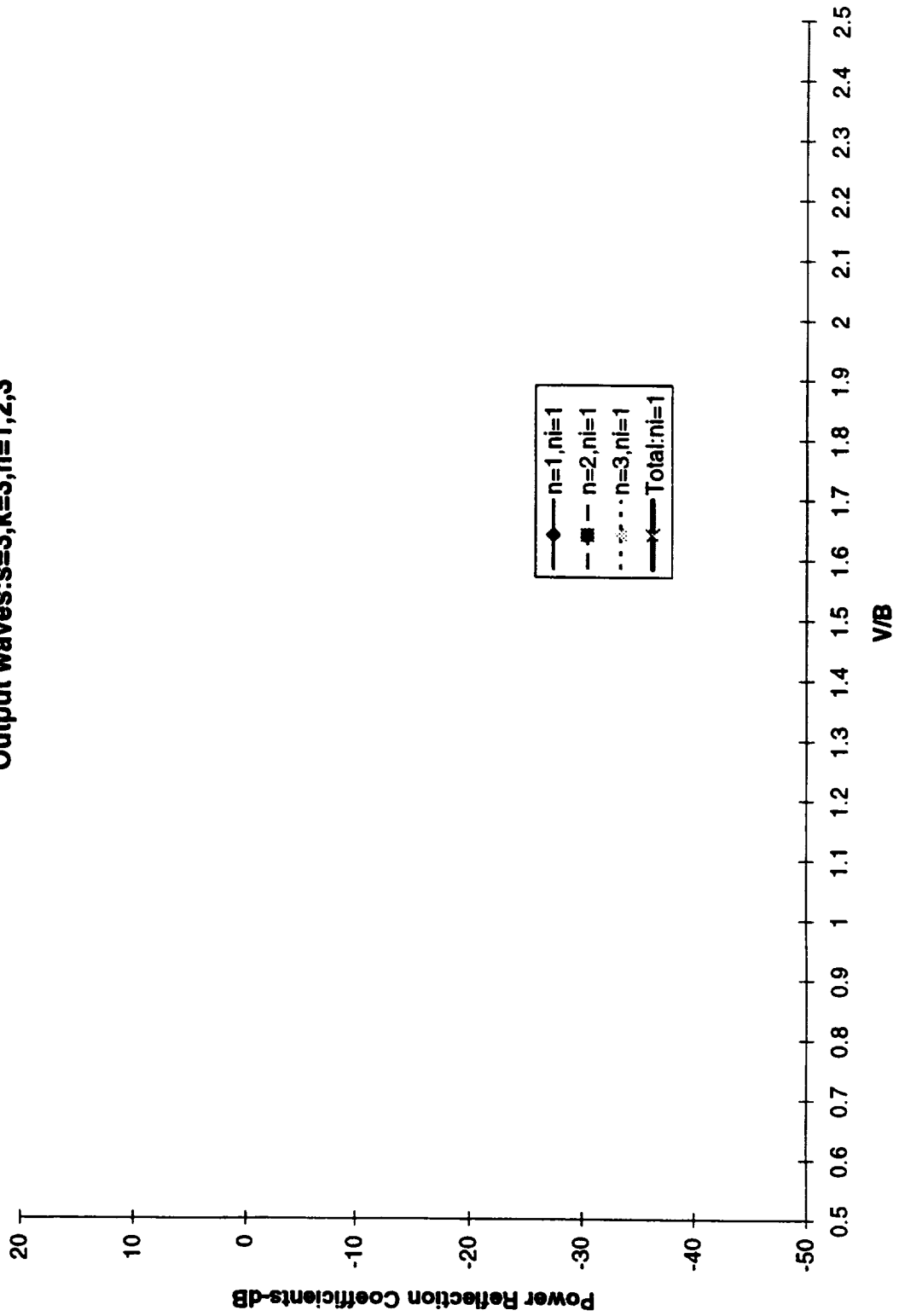
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

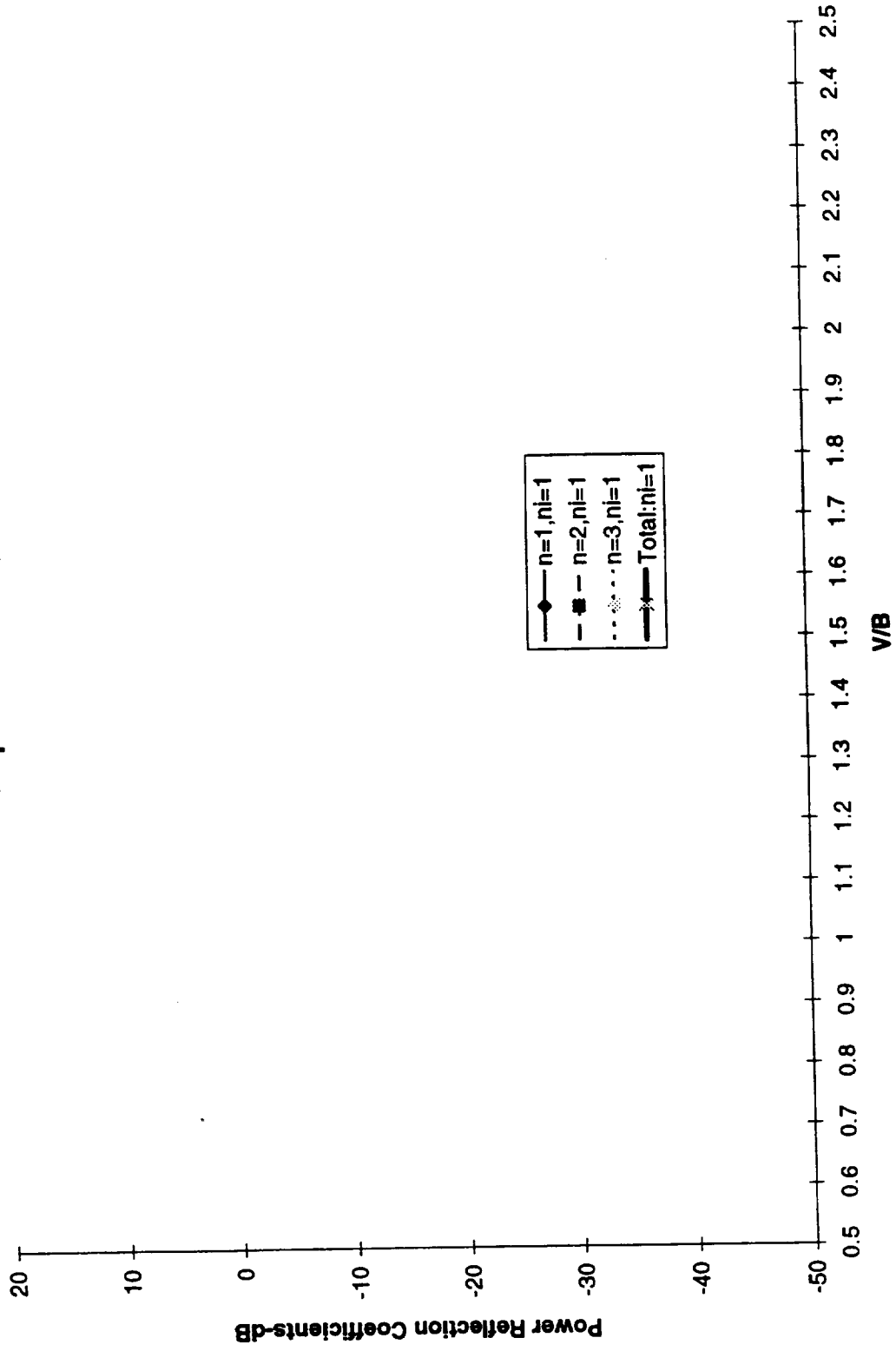
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_l=3, n_l=1$

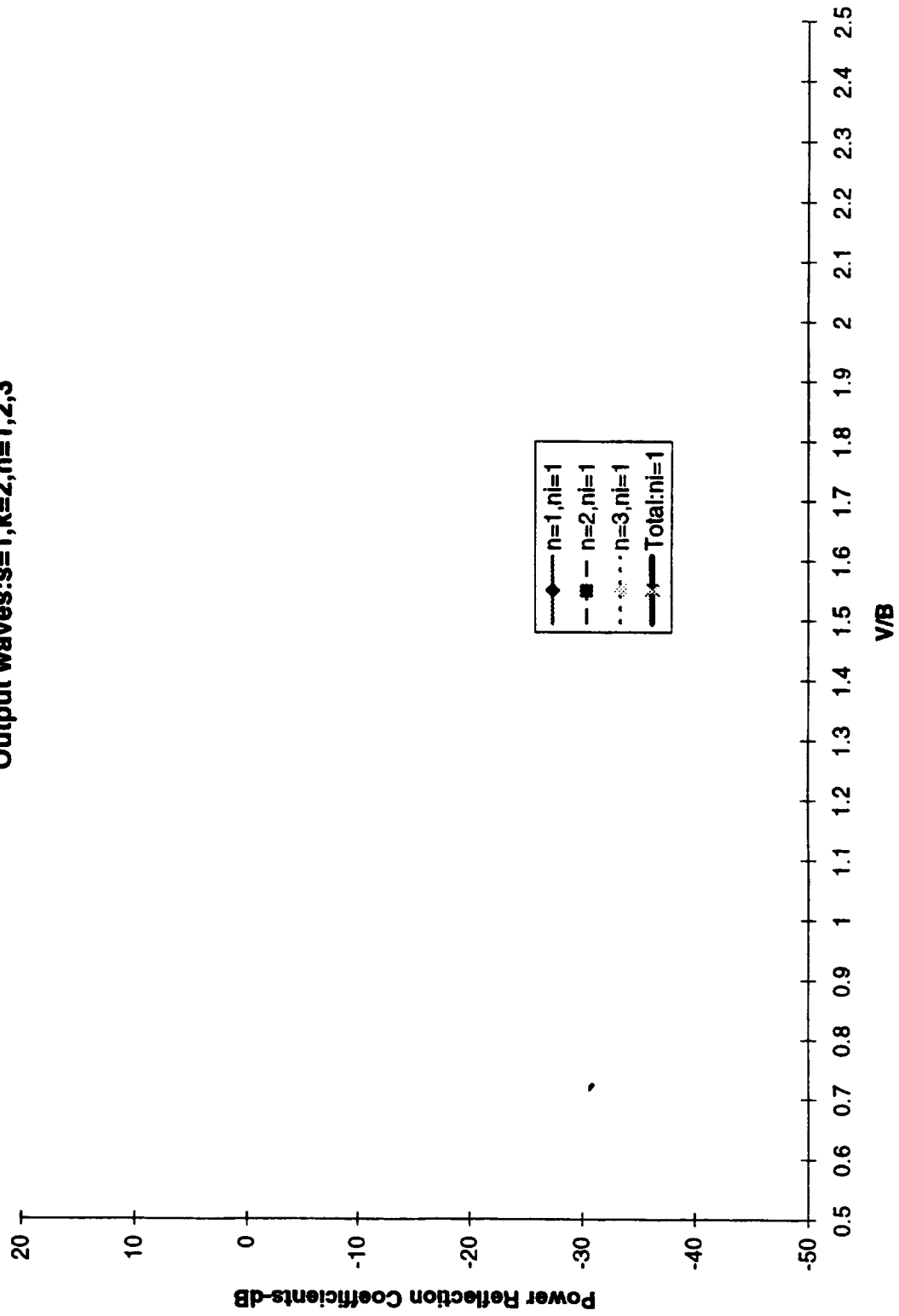
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

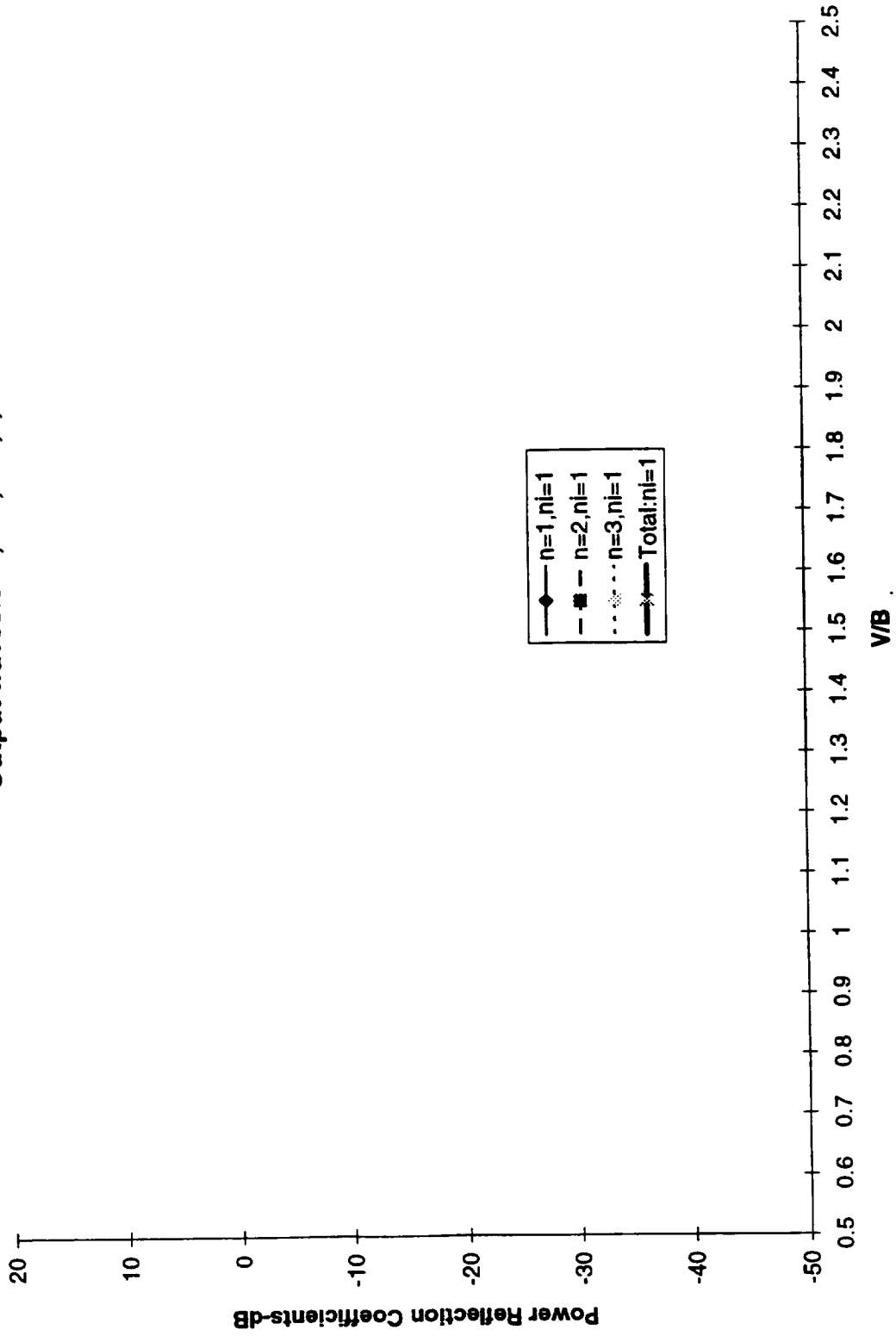
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

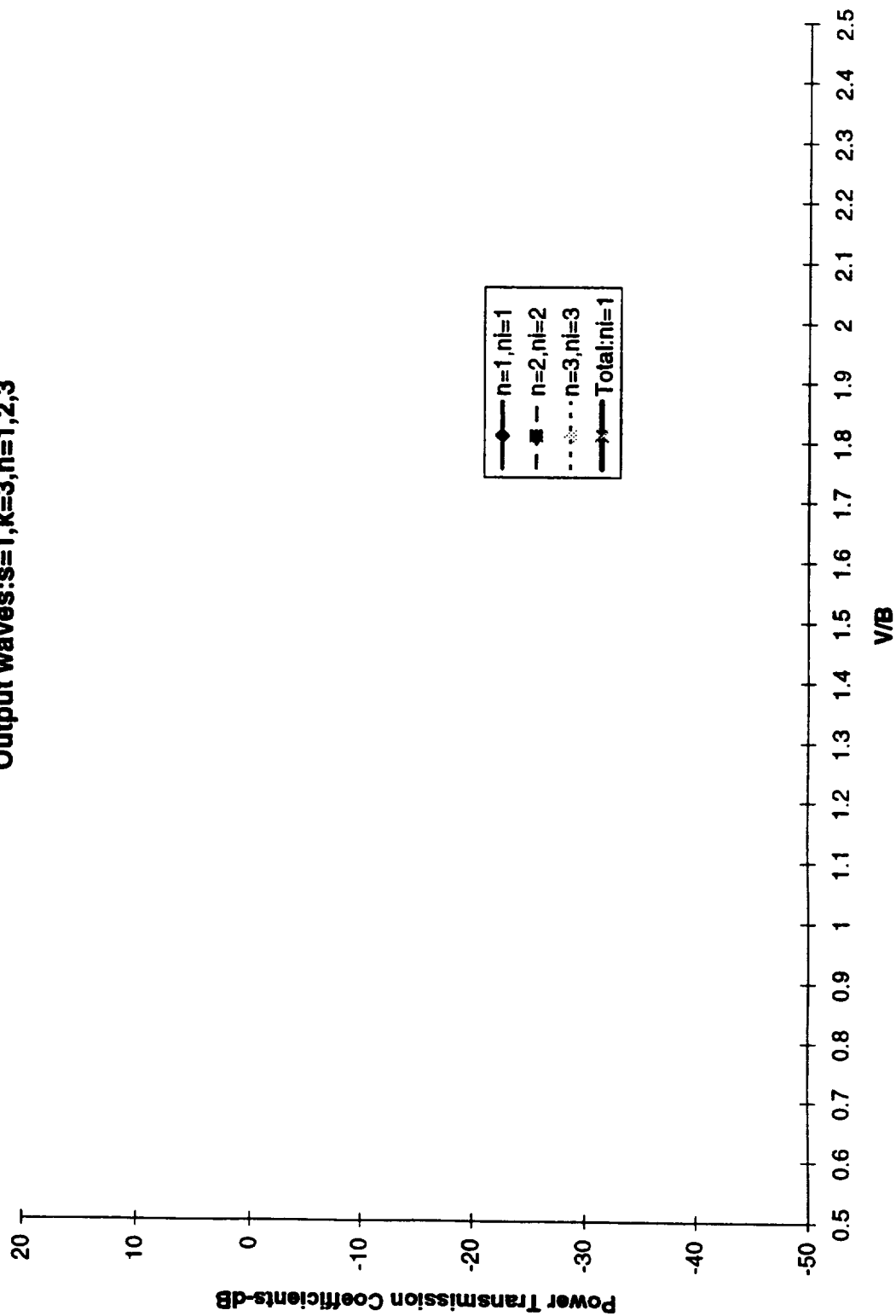
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

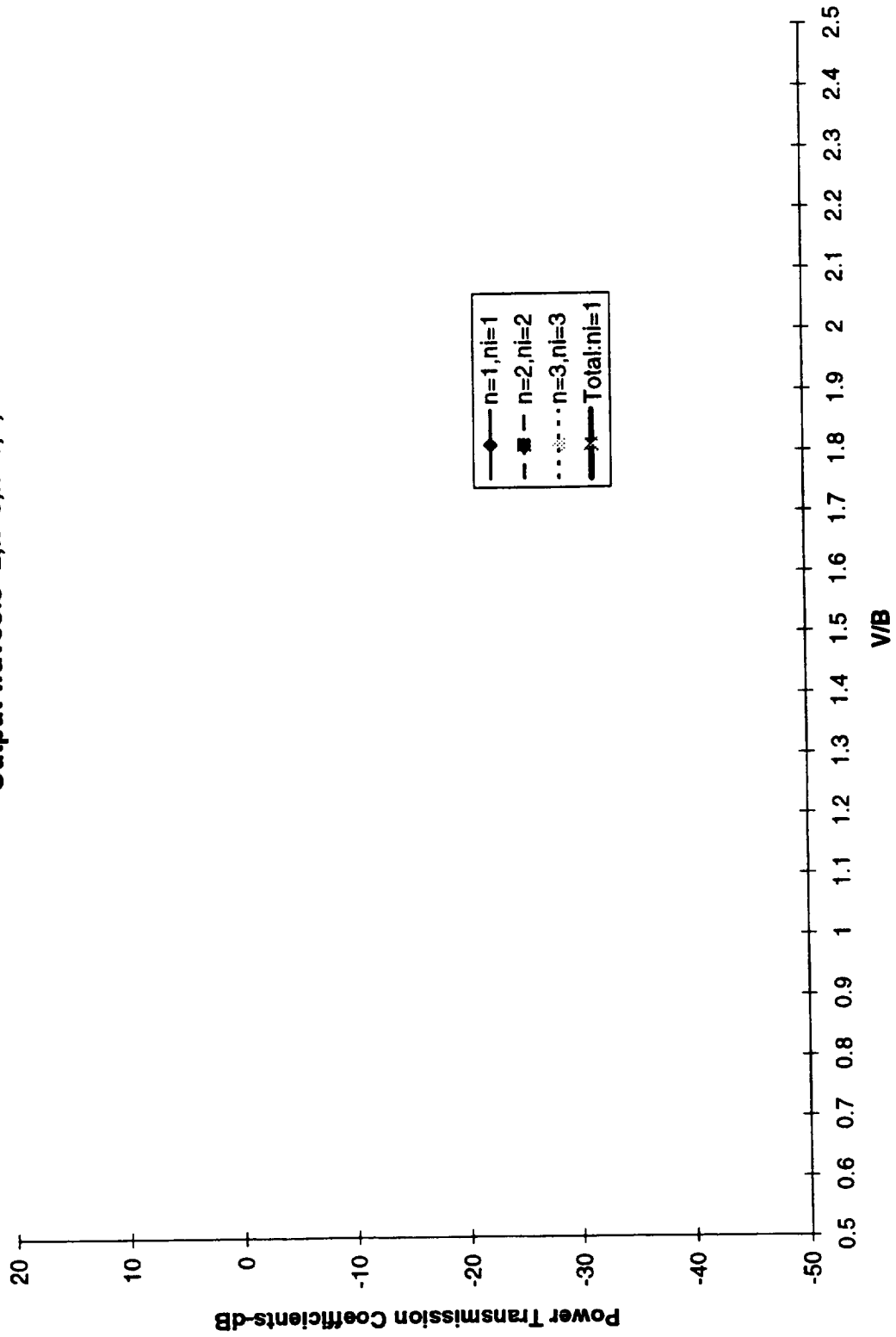
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

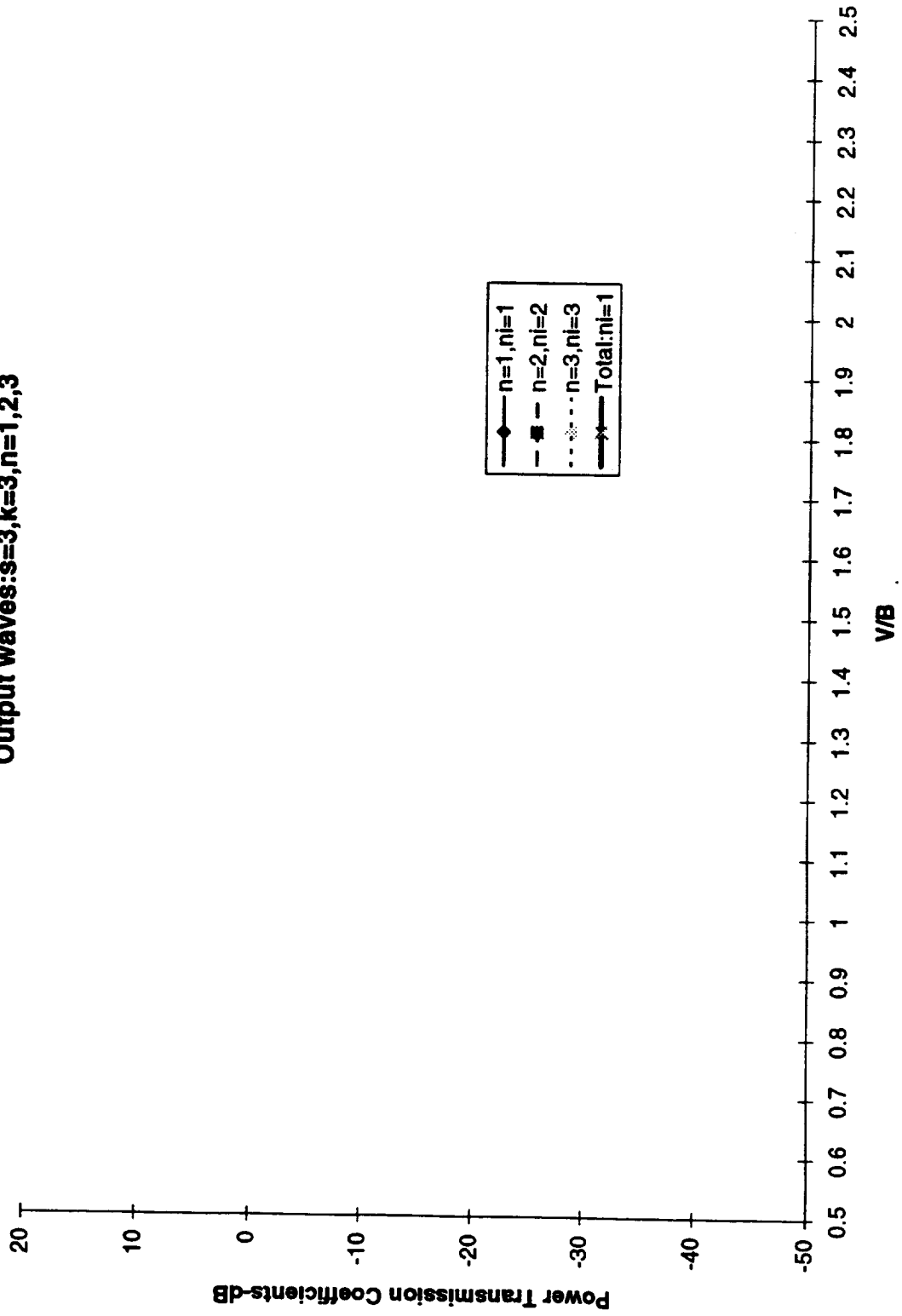
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

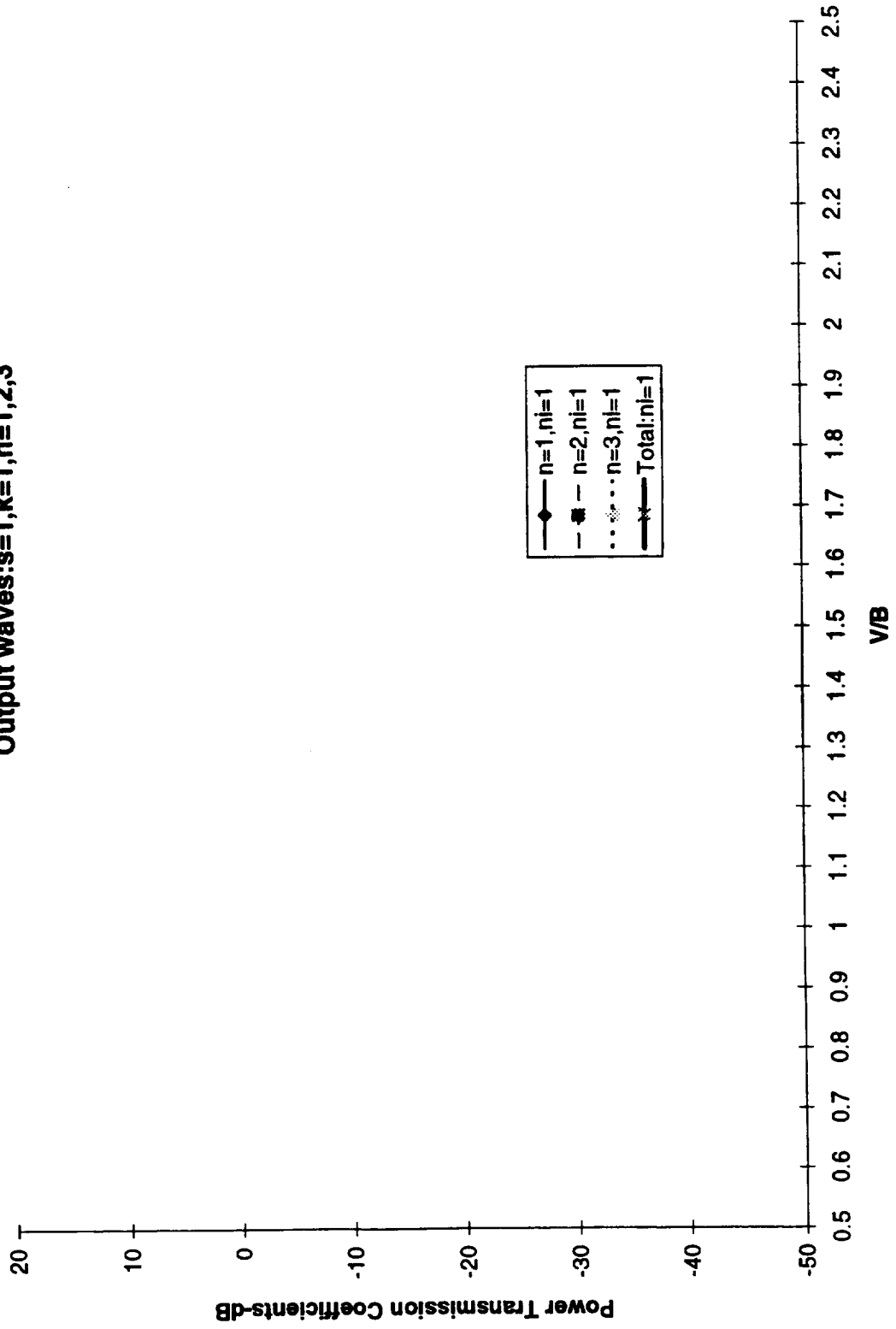
Output waves: $s=3, k=3, n=1, 2, 3$



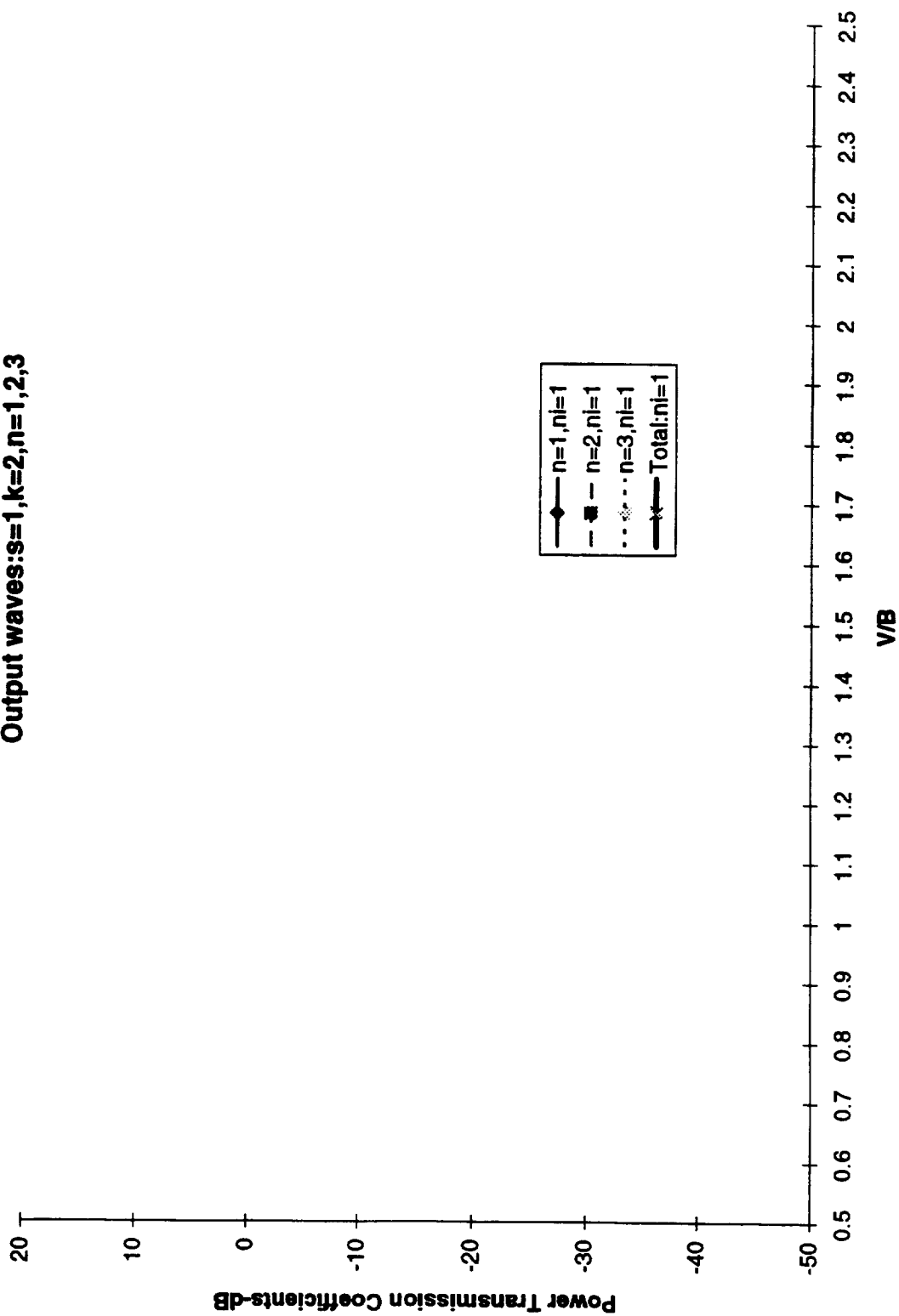
Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

Output waves: $s=1, k=1, n=1, 2, 3$

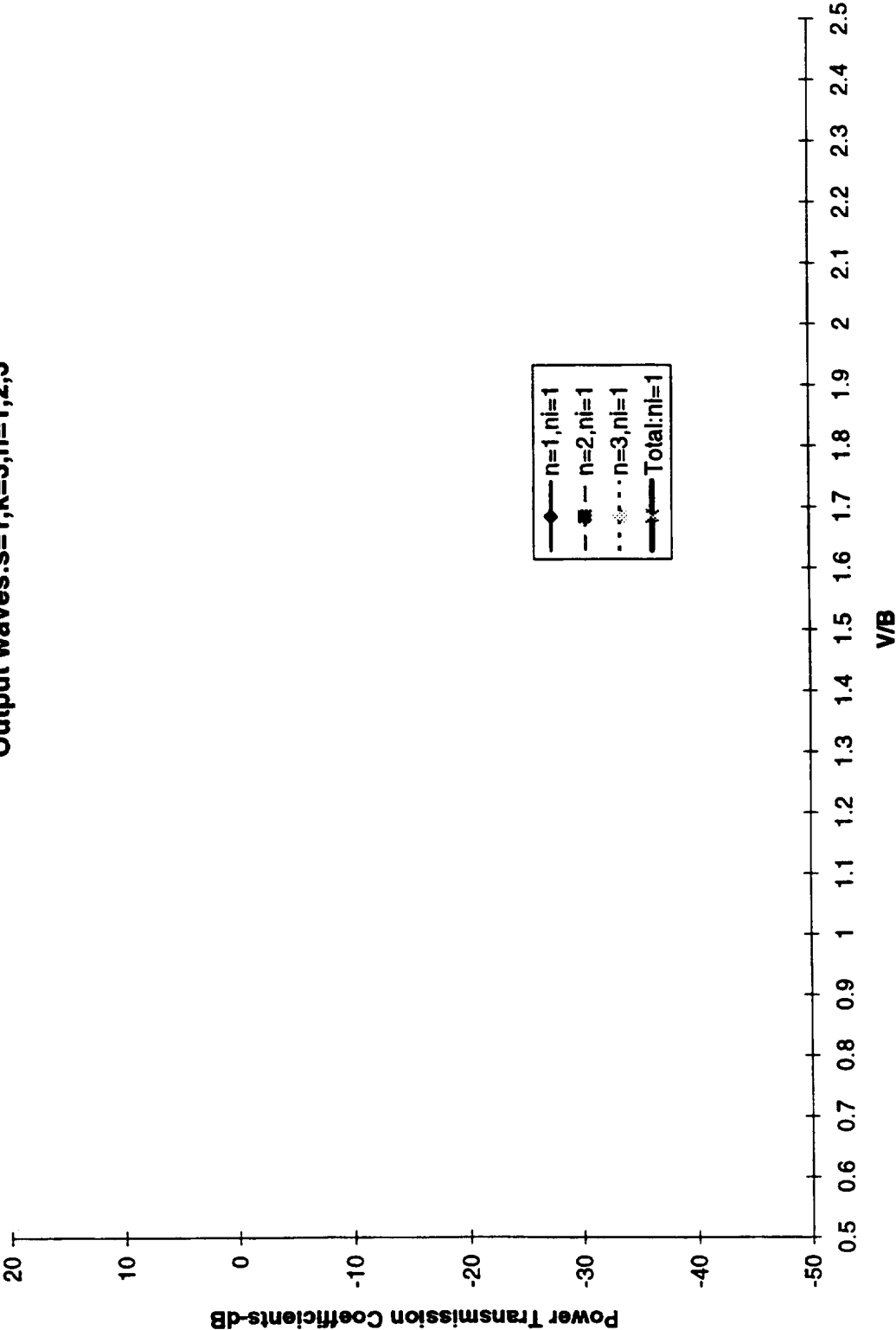


Stator Transmission-High Speed Case
Input wave:sl=1,kl=3,ni=1
Output waves:s=1,k=2,n=1,2,3



Stator Transmission-High Speed Case

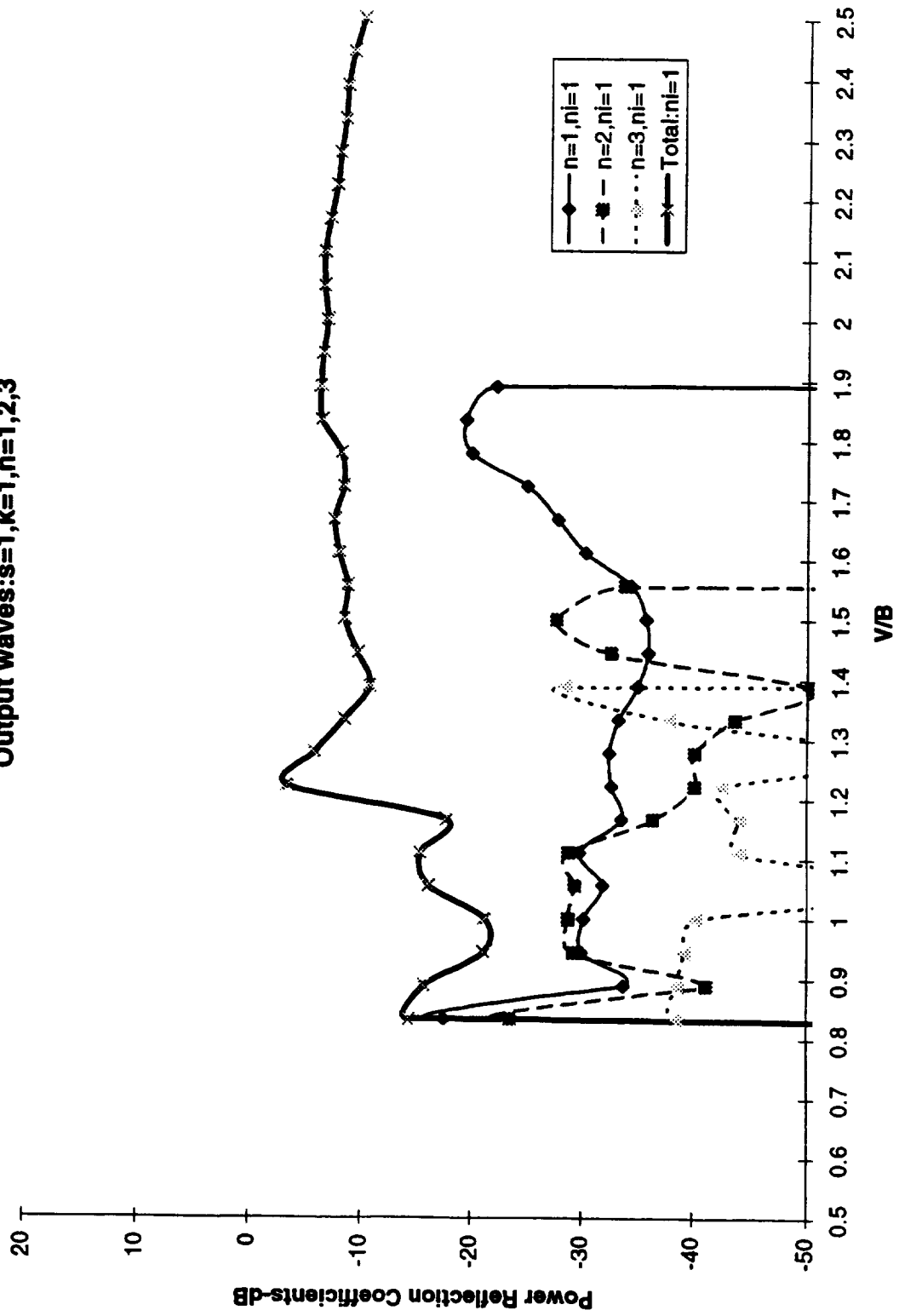
Input wave: $s_i=1, k_i=3, n_i=1$
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

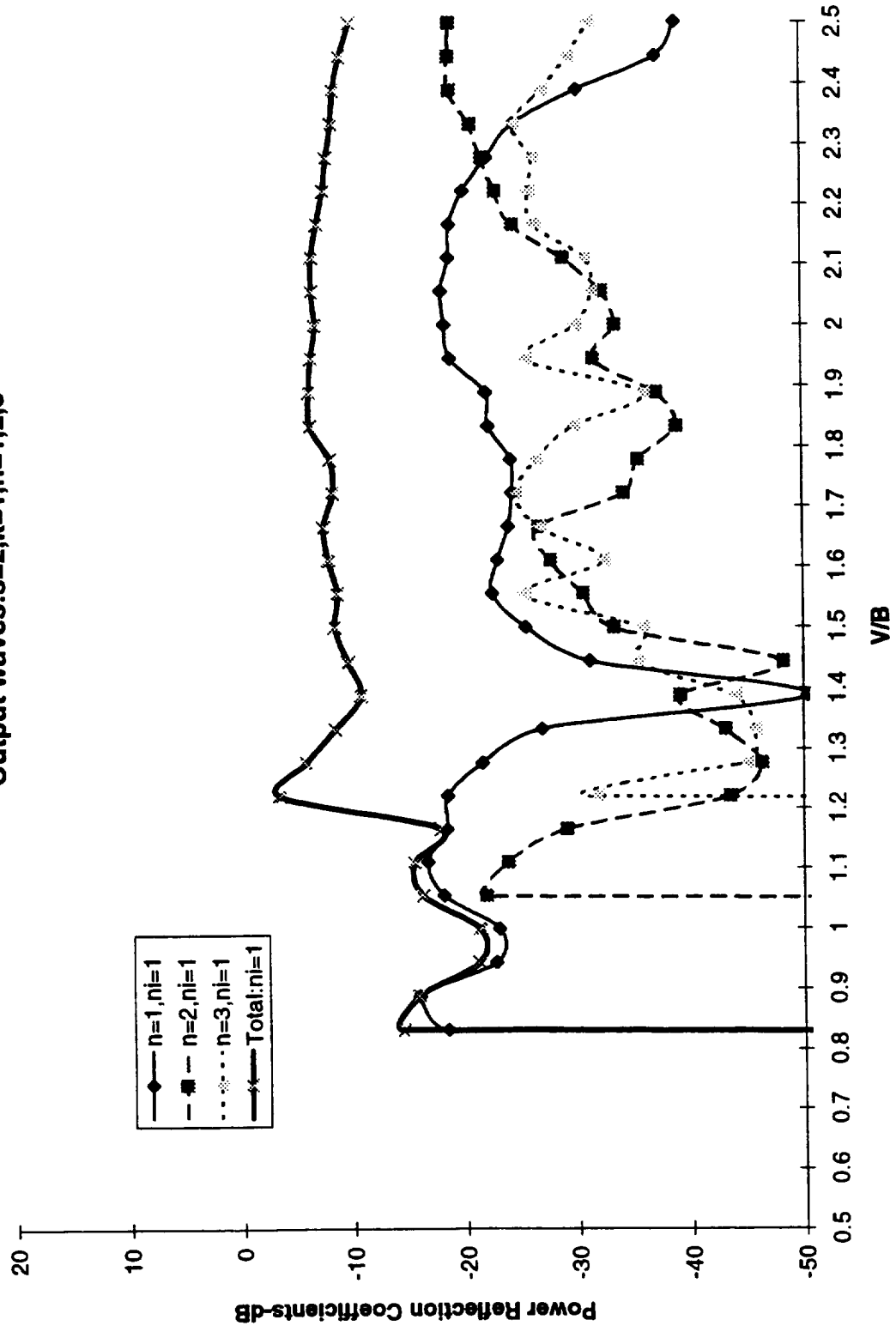
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

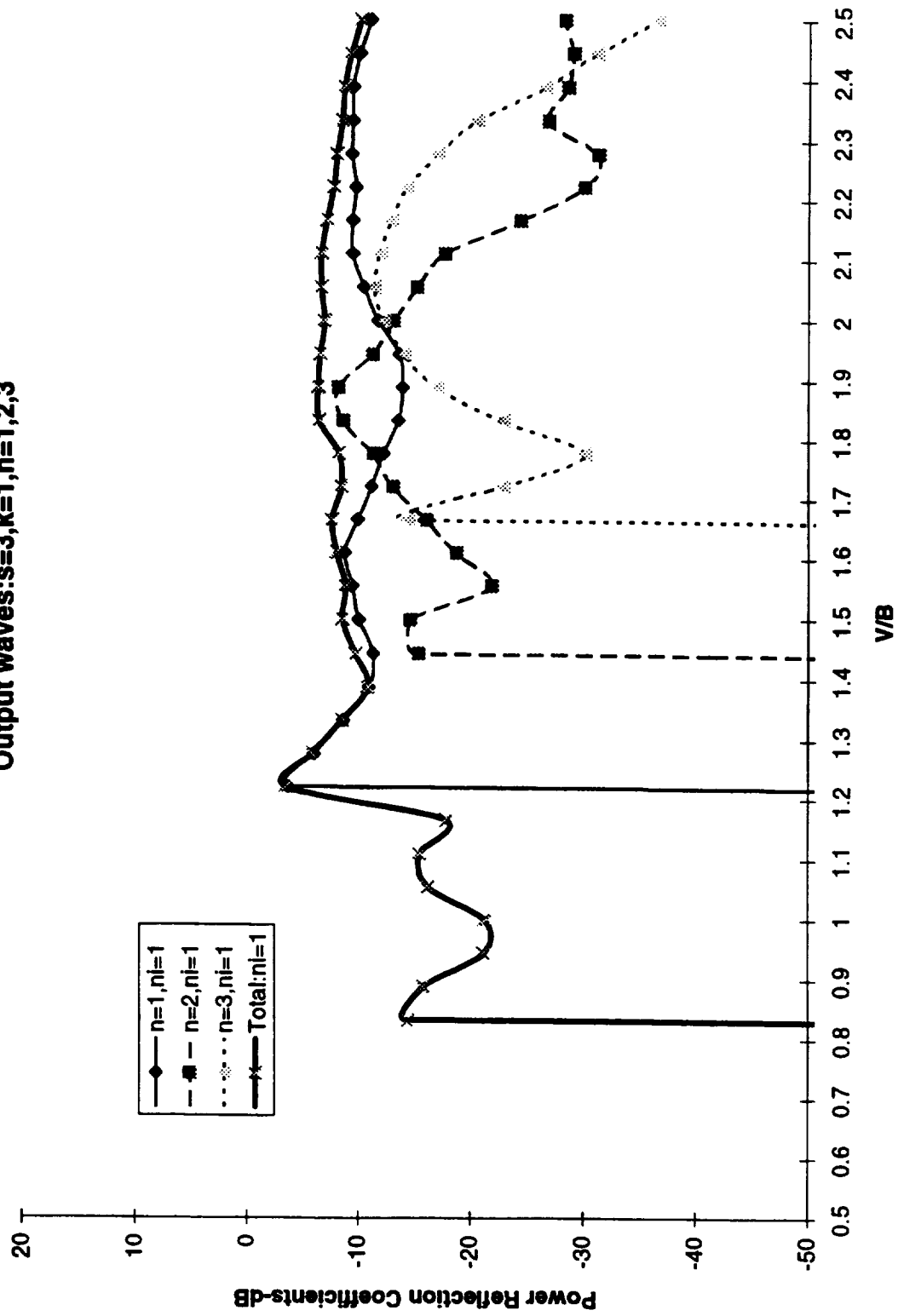
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_l=2, k_l=1, n_l=1$

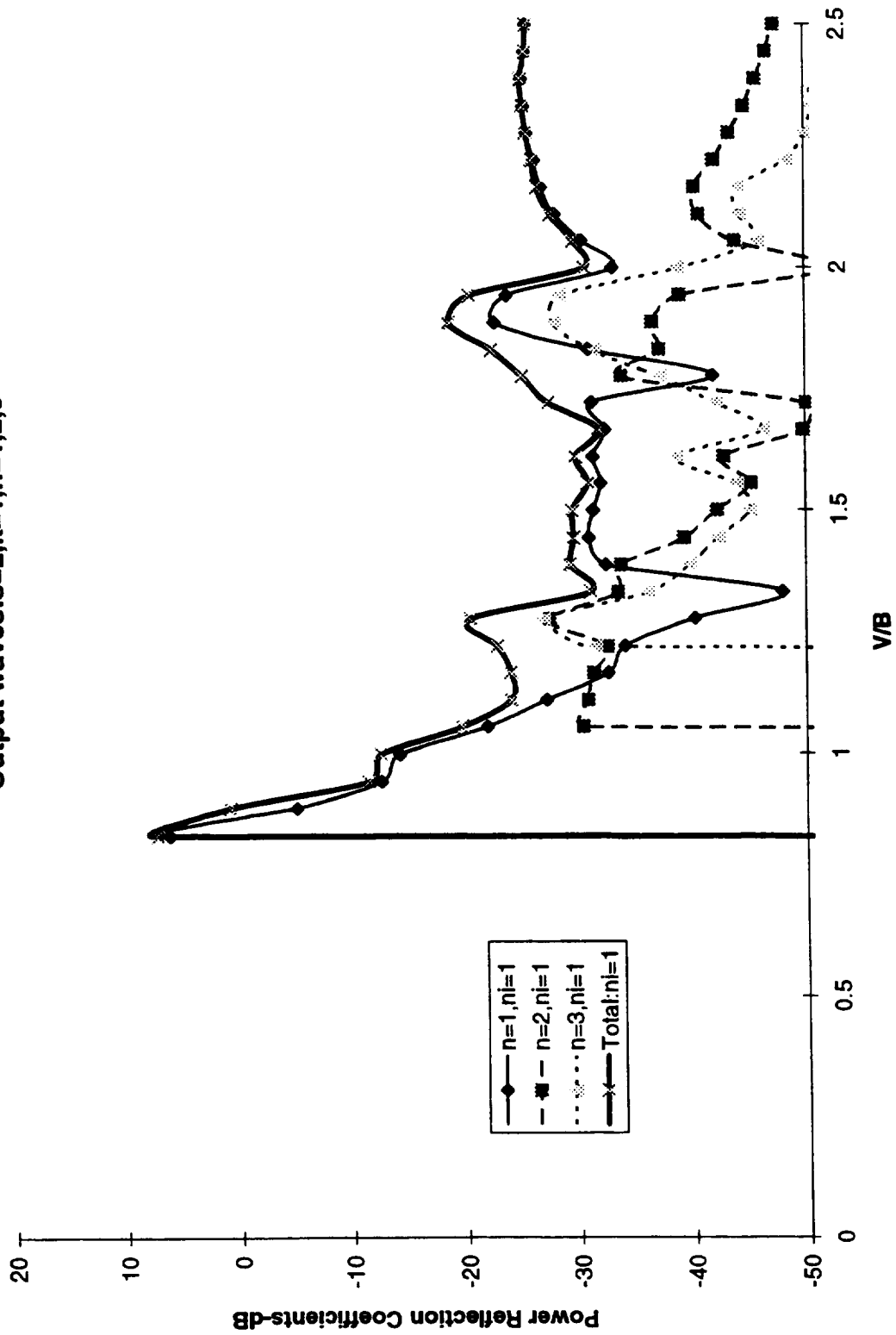
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

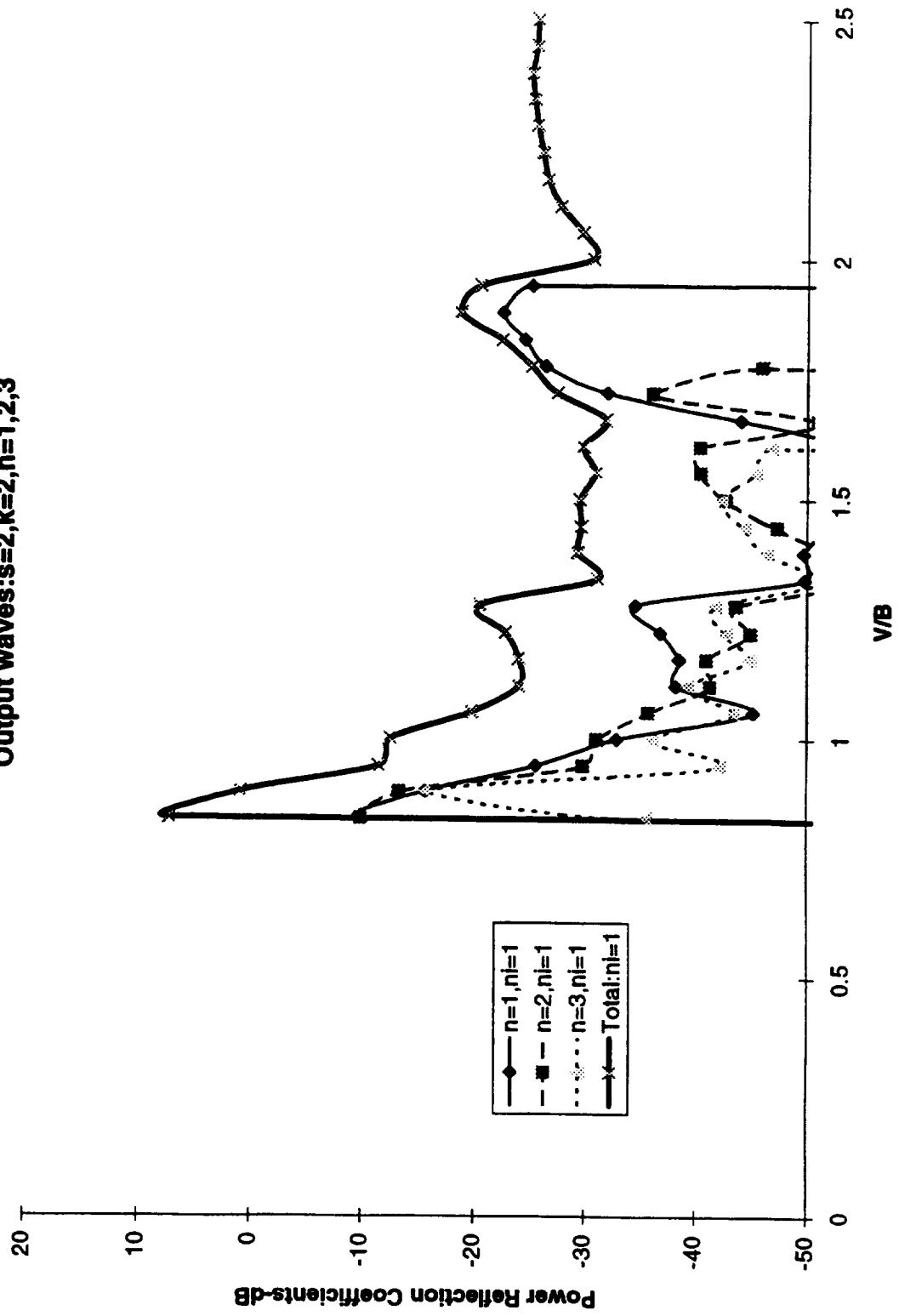
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_l=2, k_l=1, n_l=1$

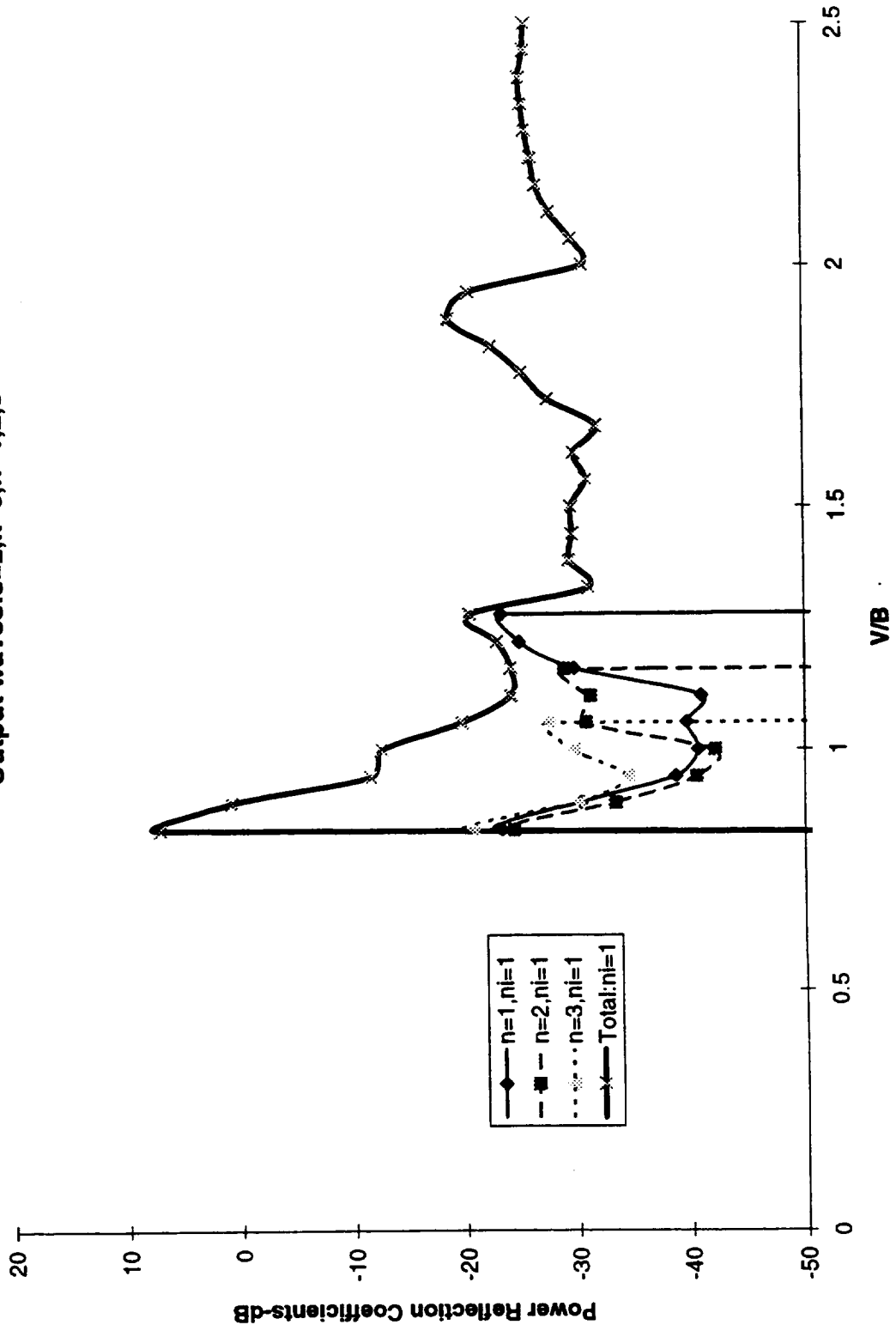
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

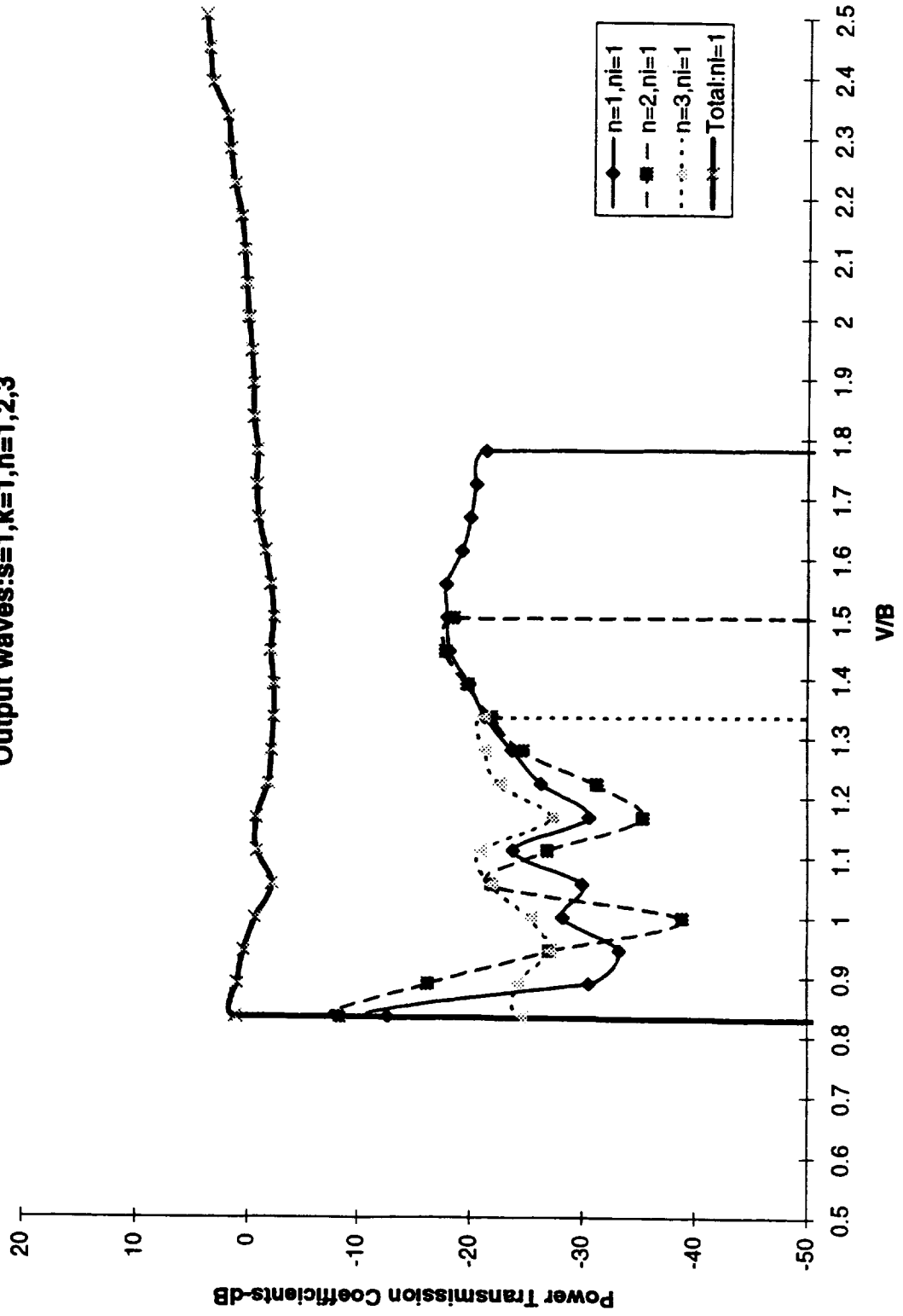
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_l=2, k_l=1, n_l=1$

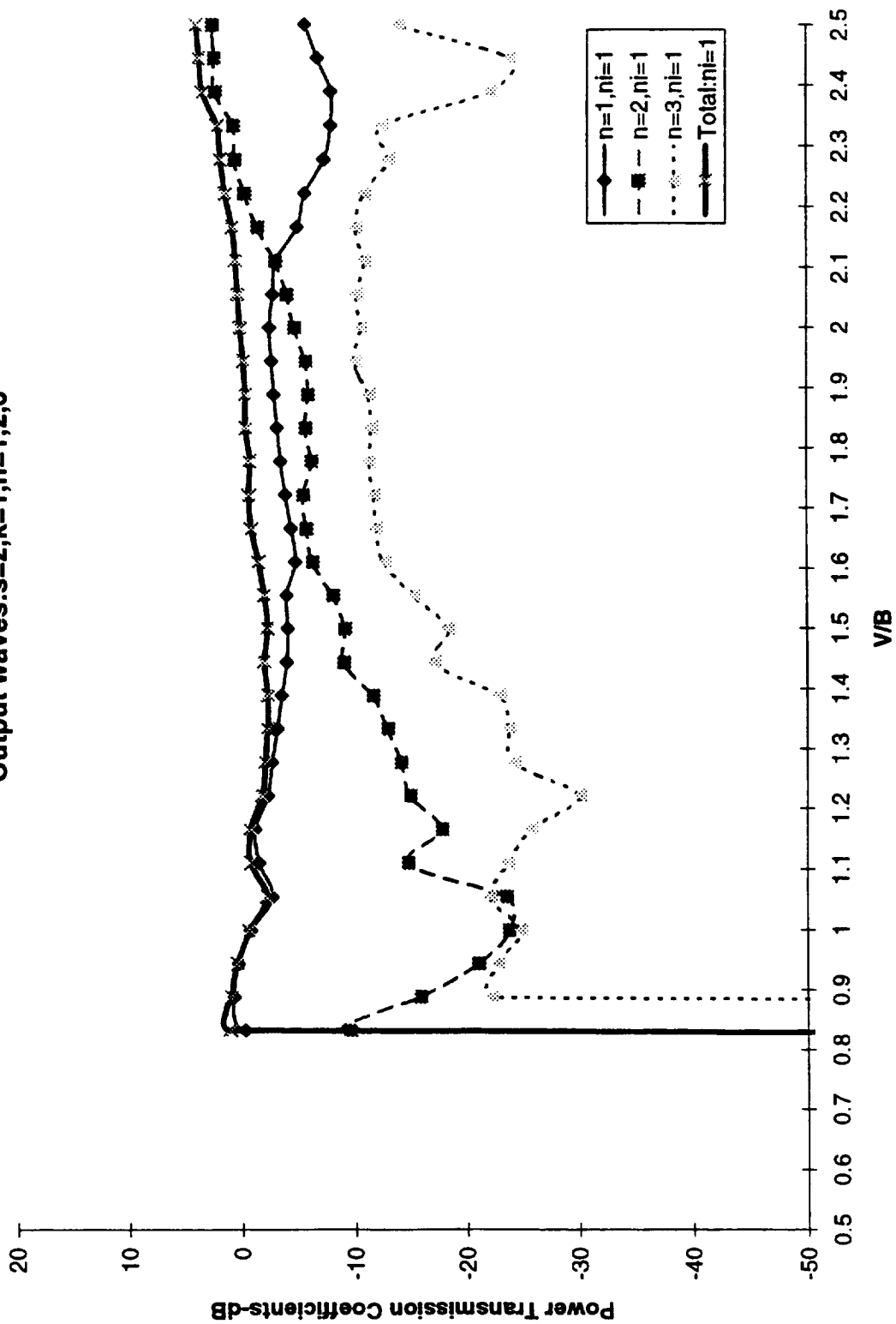
Output wave: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

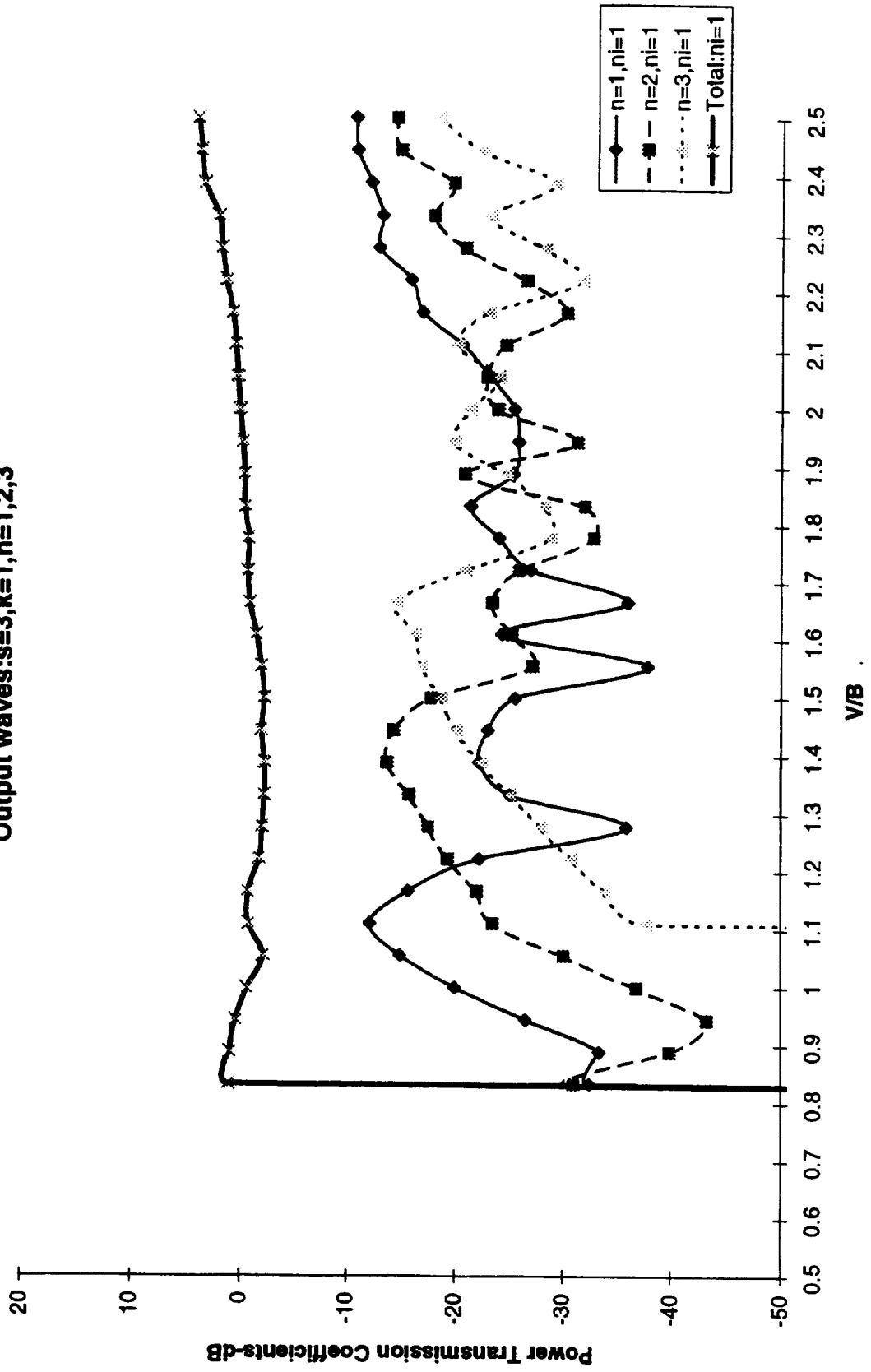
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

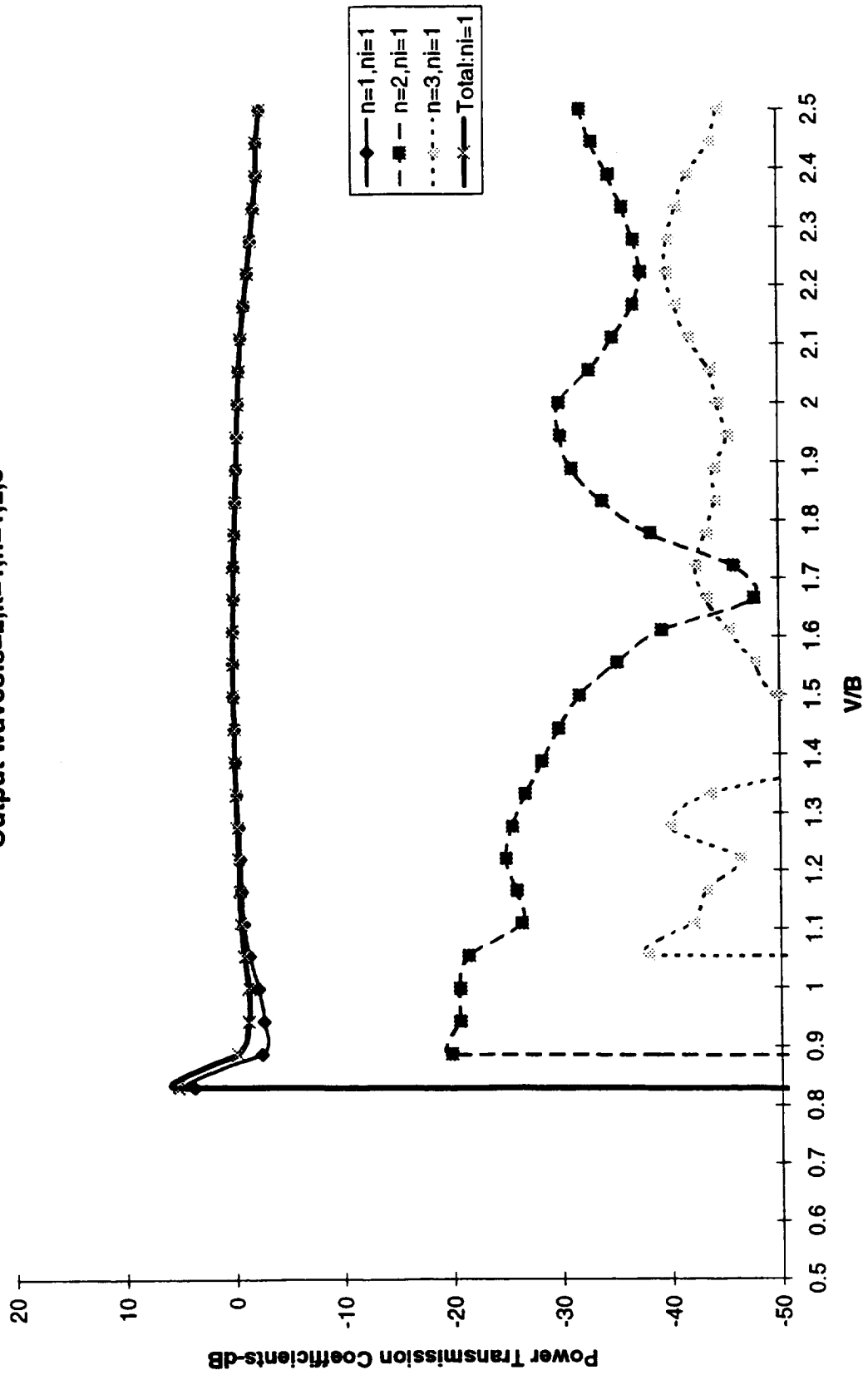
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $sl=2, ki=1, ni=1$

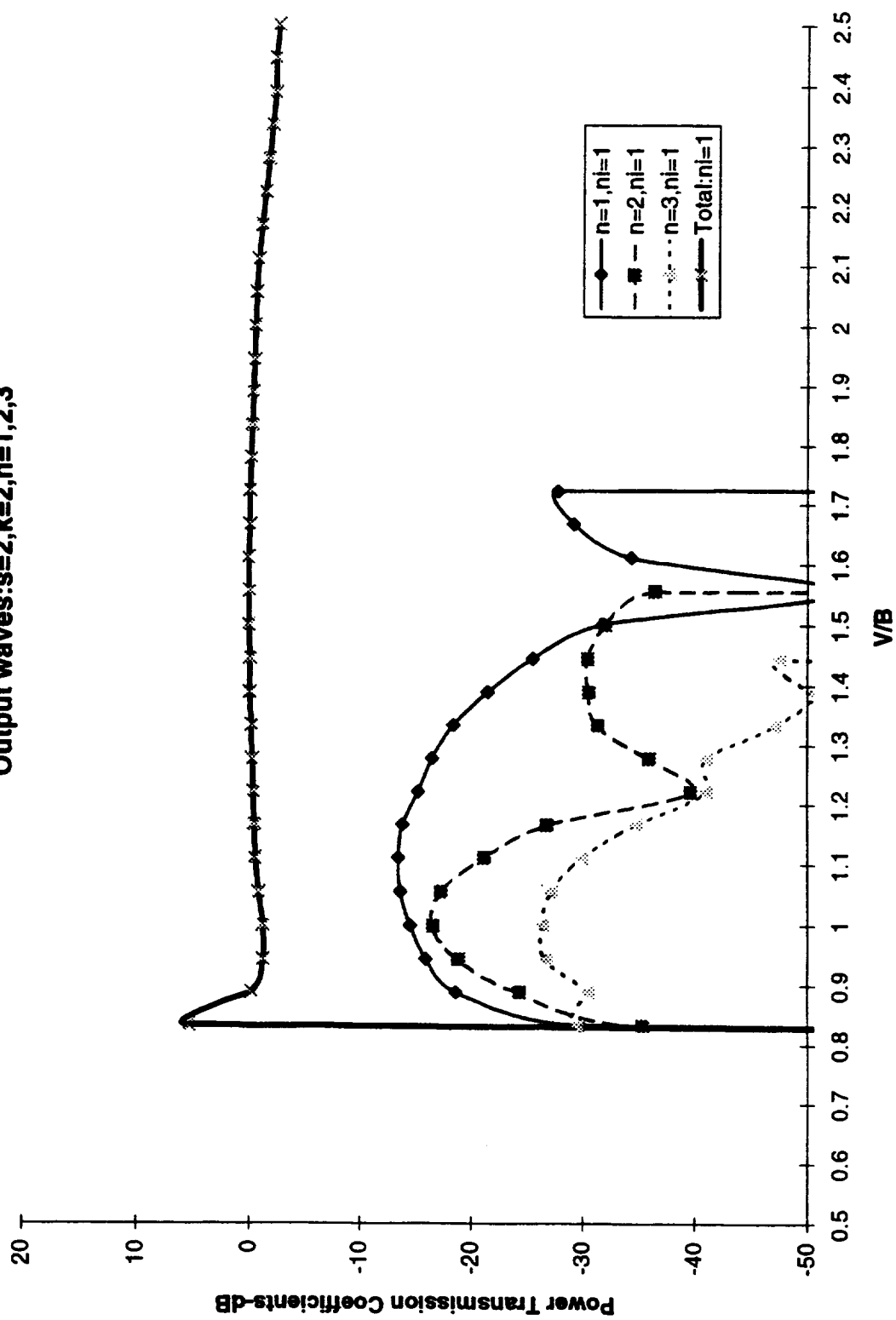
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_l=2, k_l=1, n_l=1$

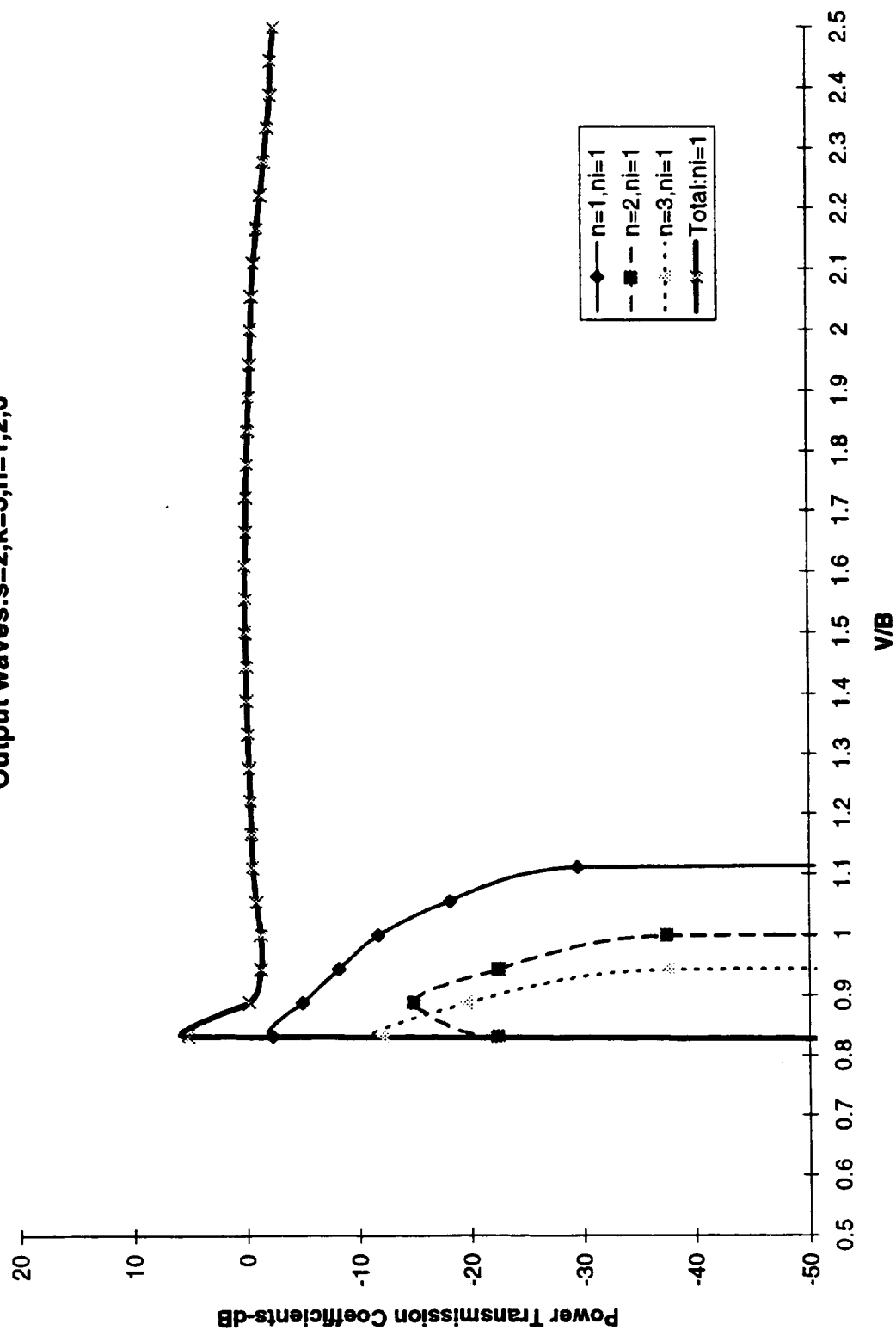
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

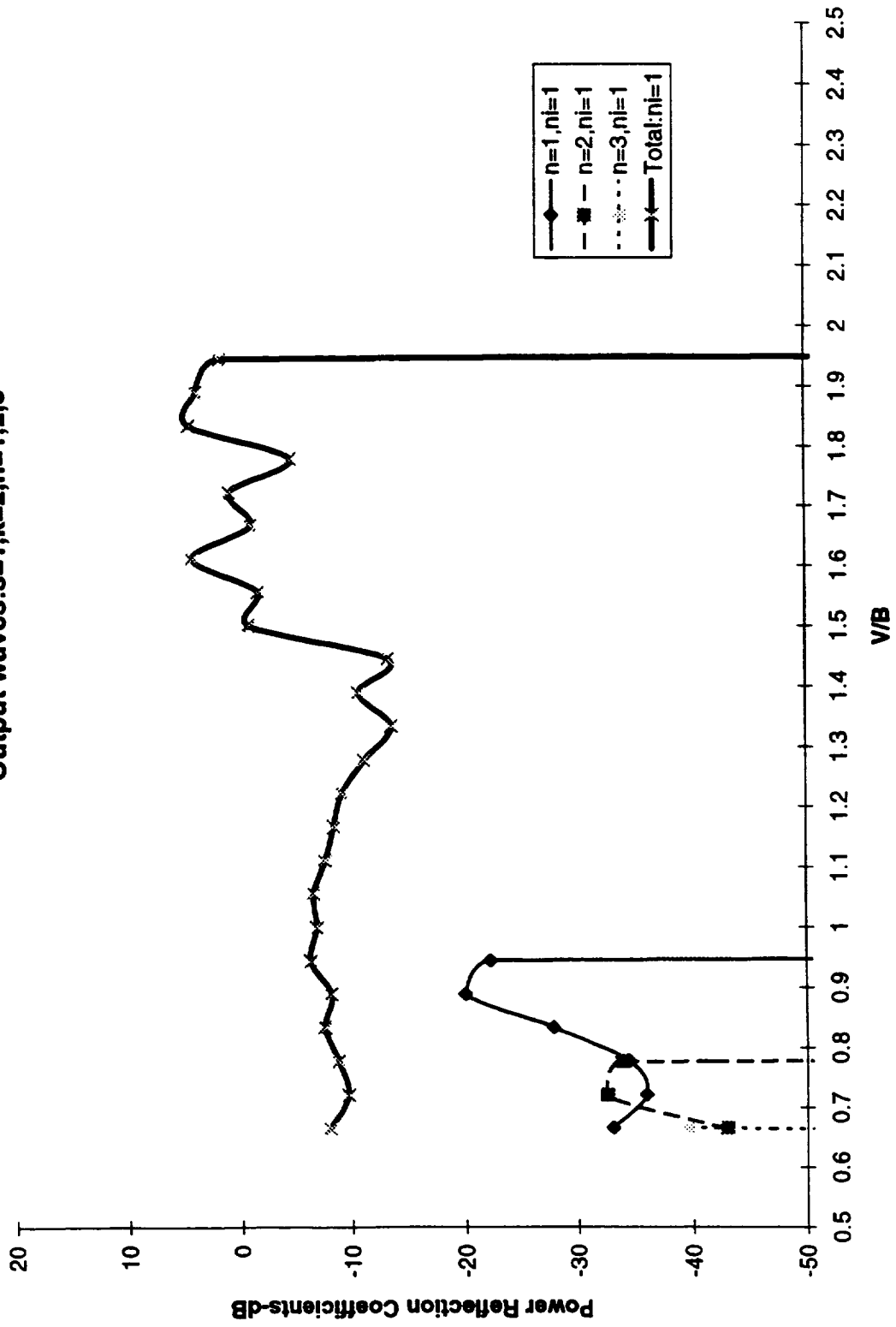
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_l=2, k_l=2, n_l=1$

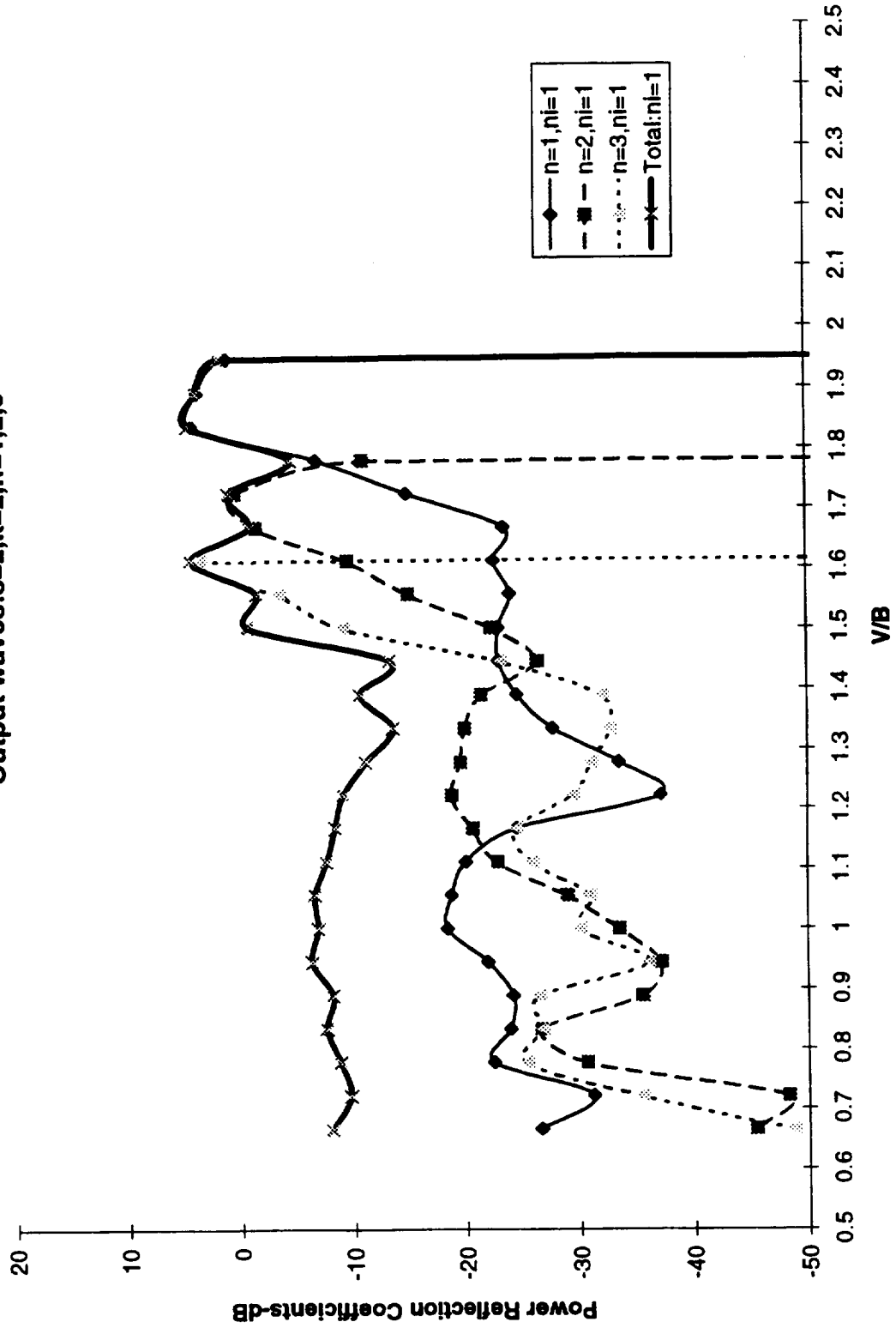
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

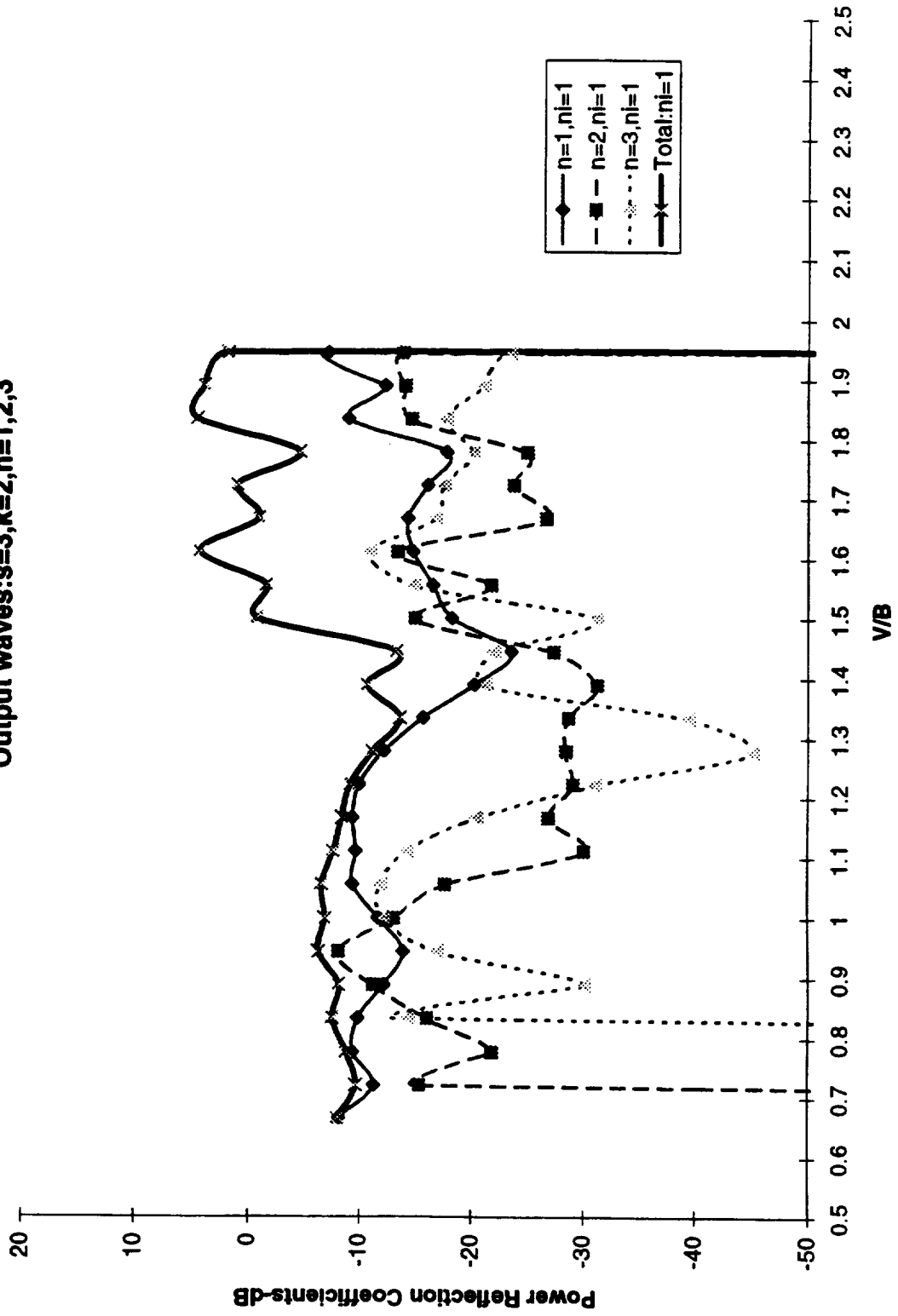
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

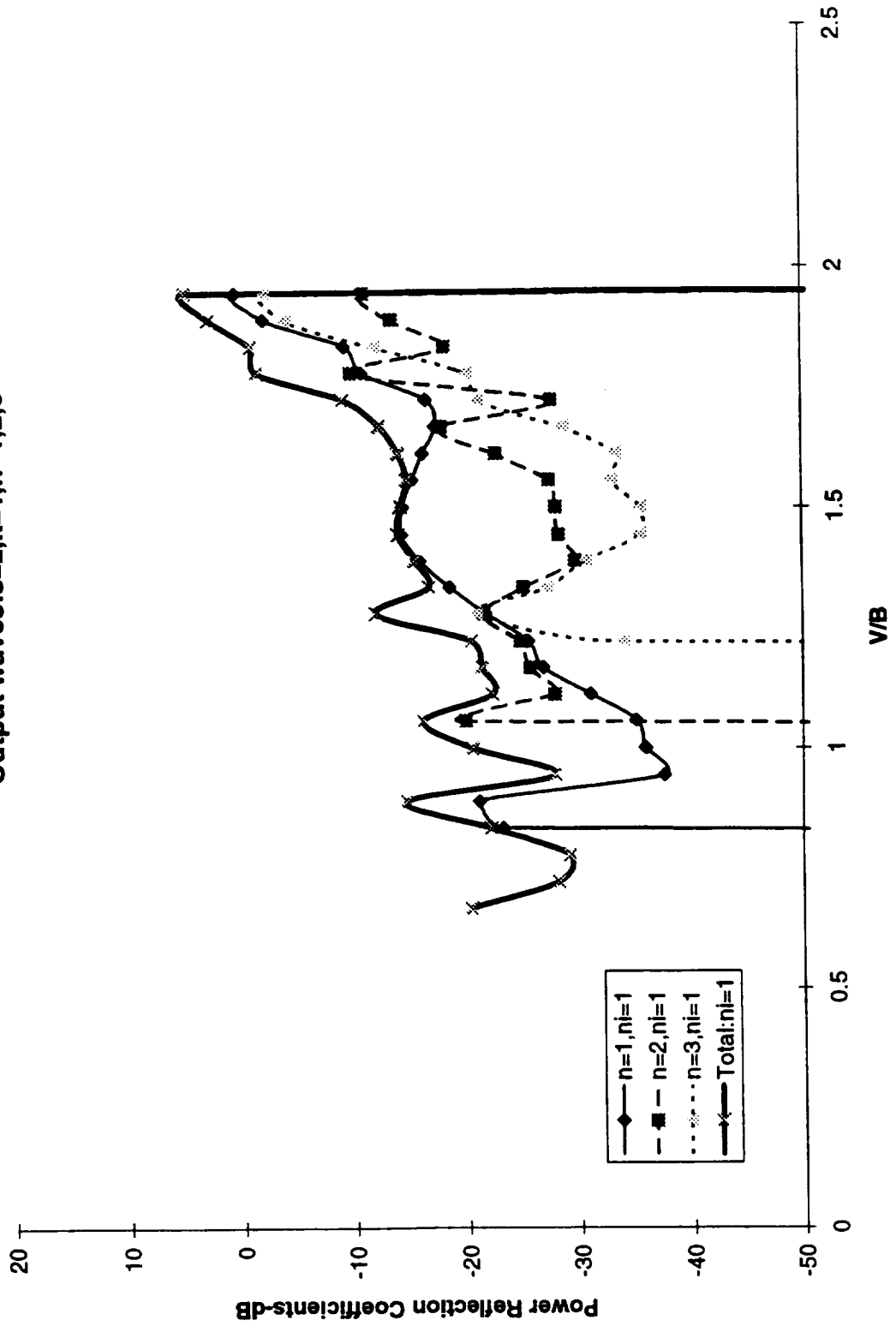
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

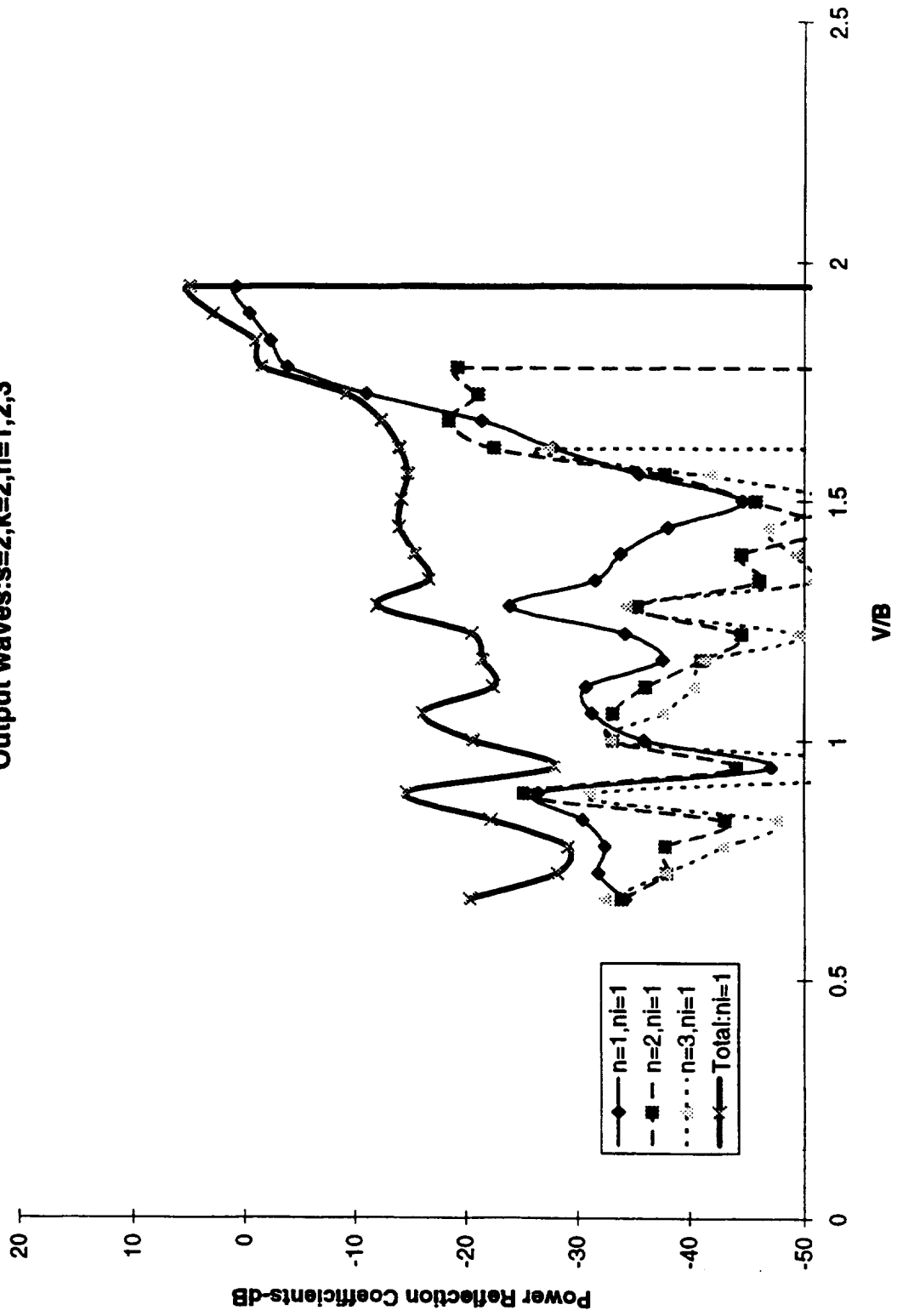
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_l=2, k_l=2, n_l=1$

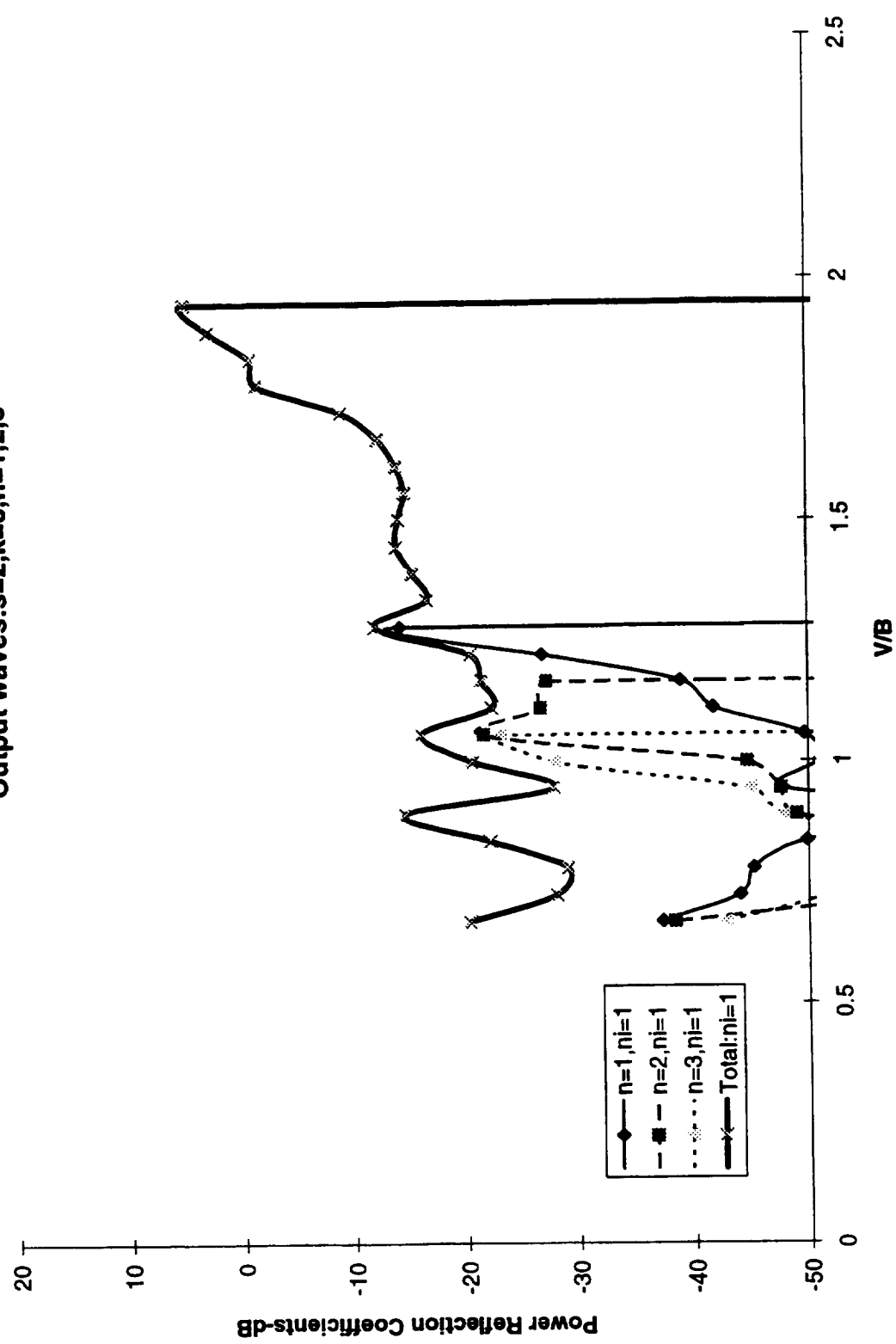
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

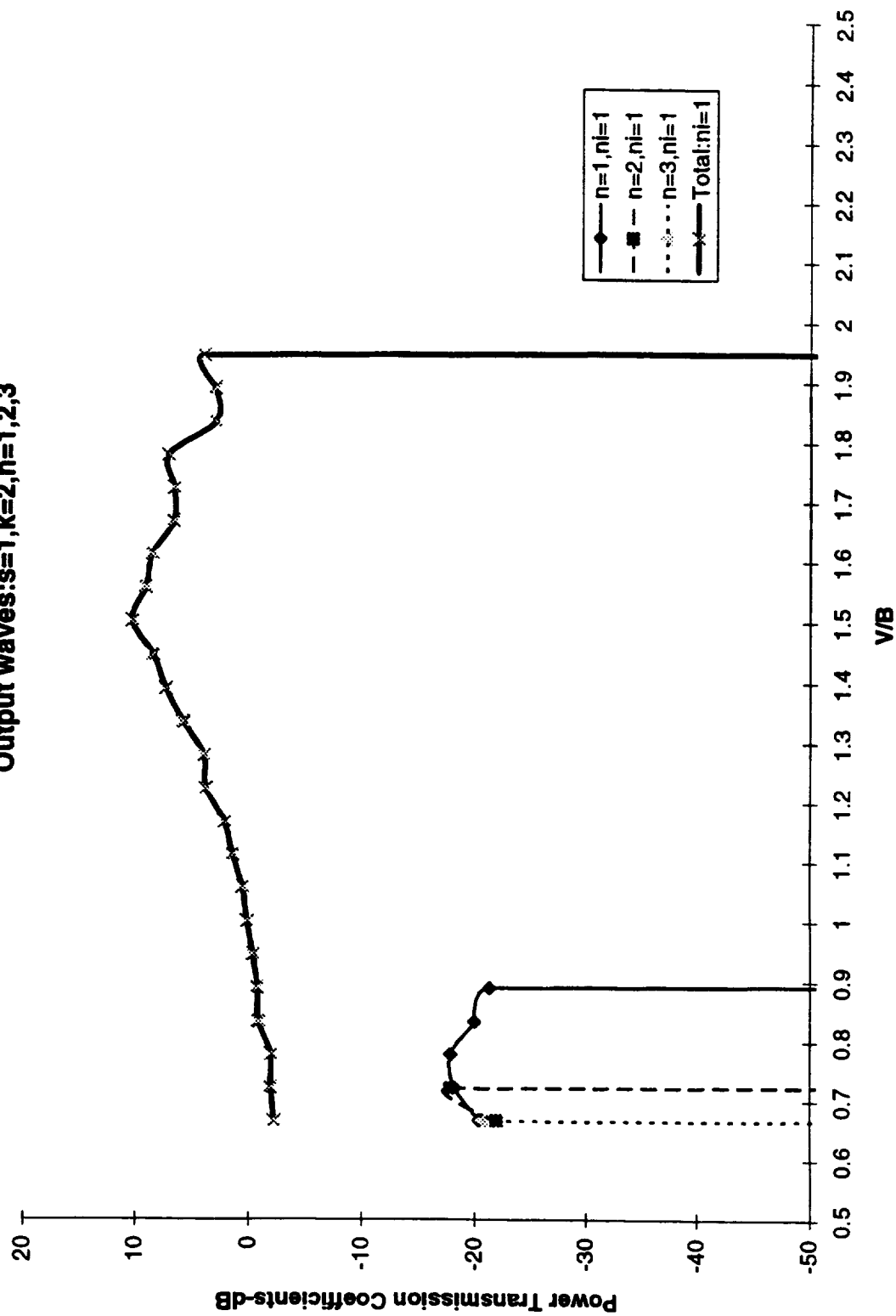
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

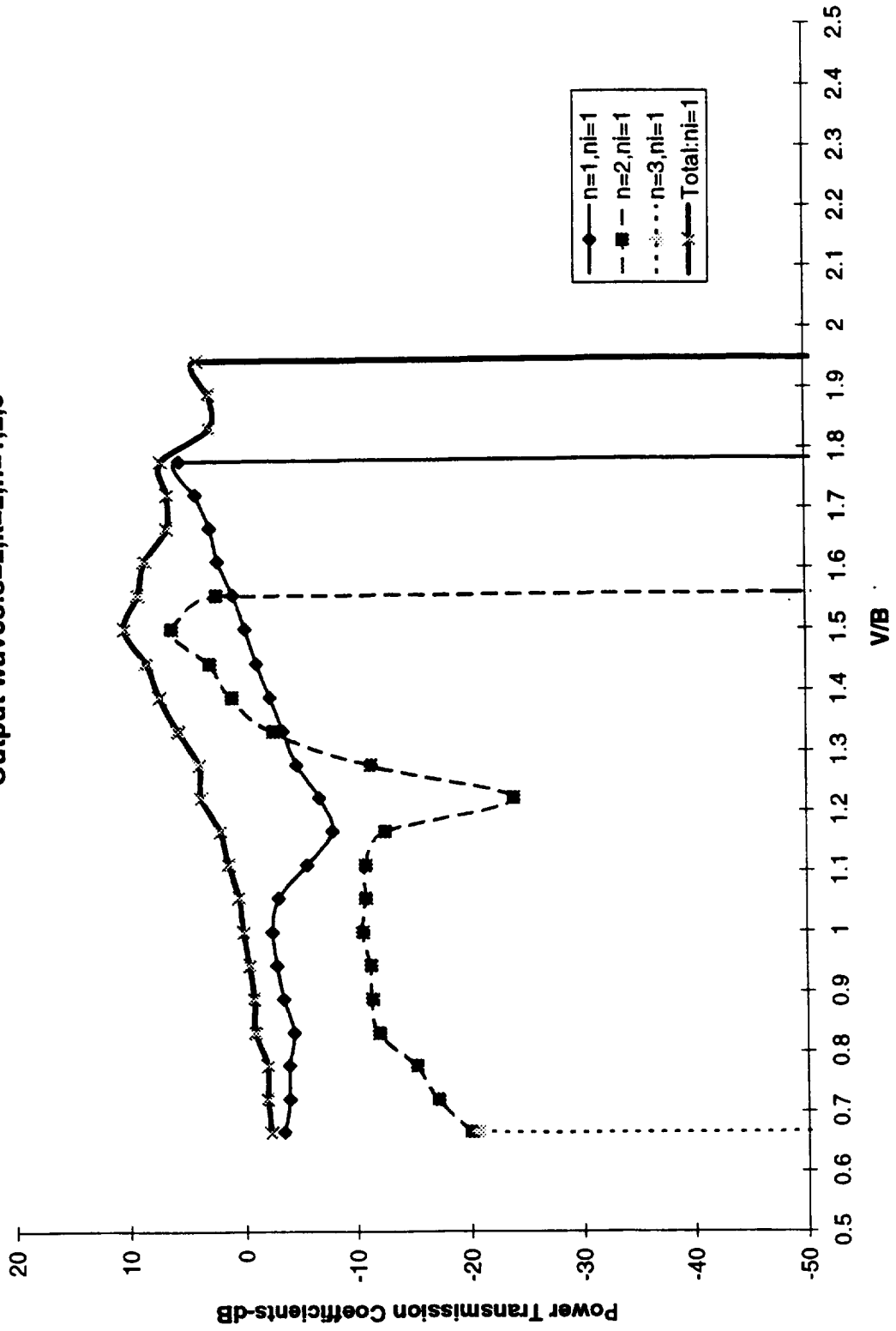
Output waves: $s=1, k=2, n=1, 2, 3$



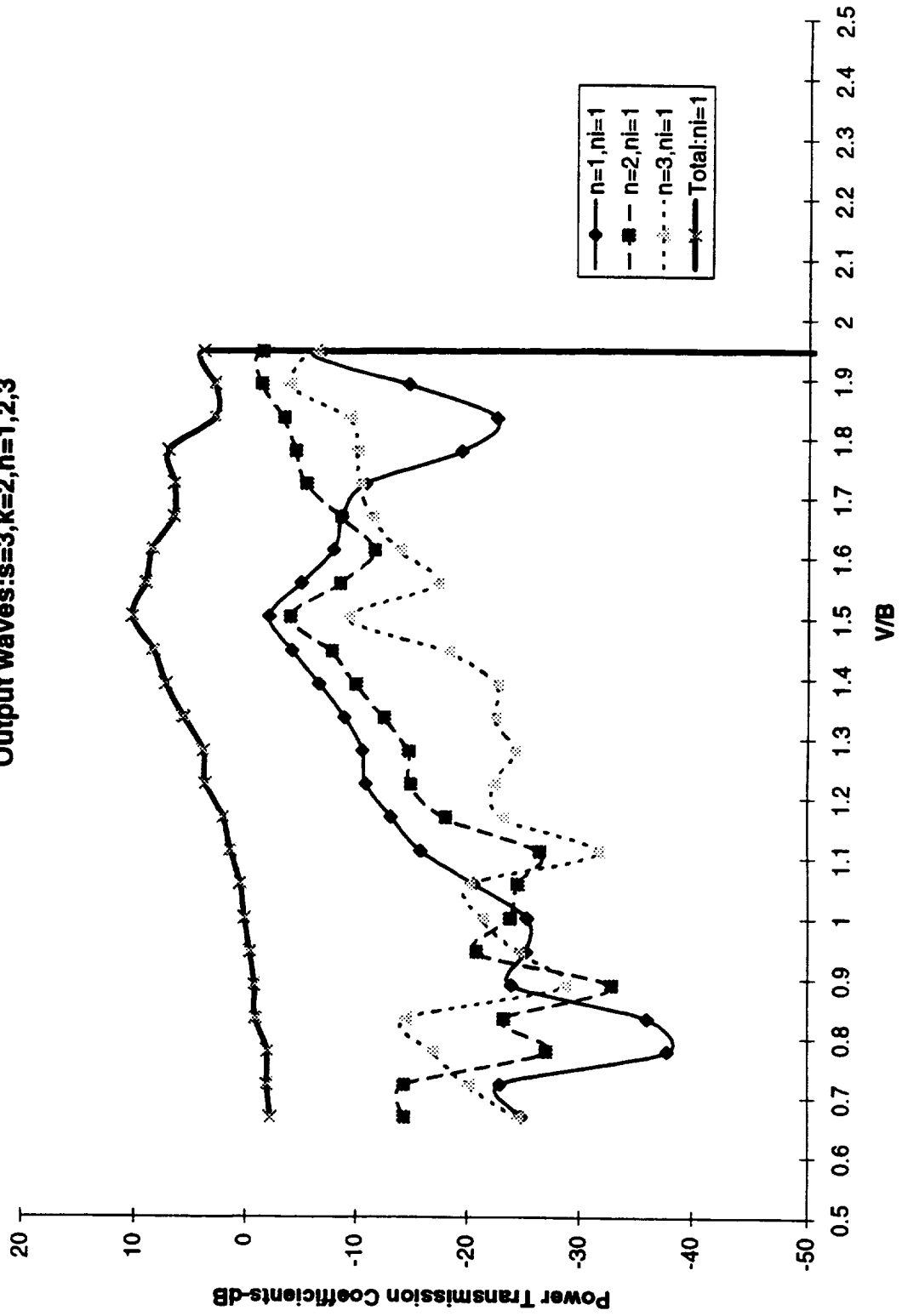
Rotor Transmission-High Speed Case

Input wave: $s_l=2, k_l=2, n_l=1$

Output waves: $s=2, k=2, n=1, 2, 3$



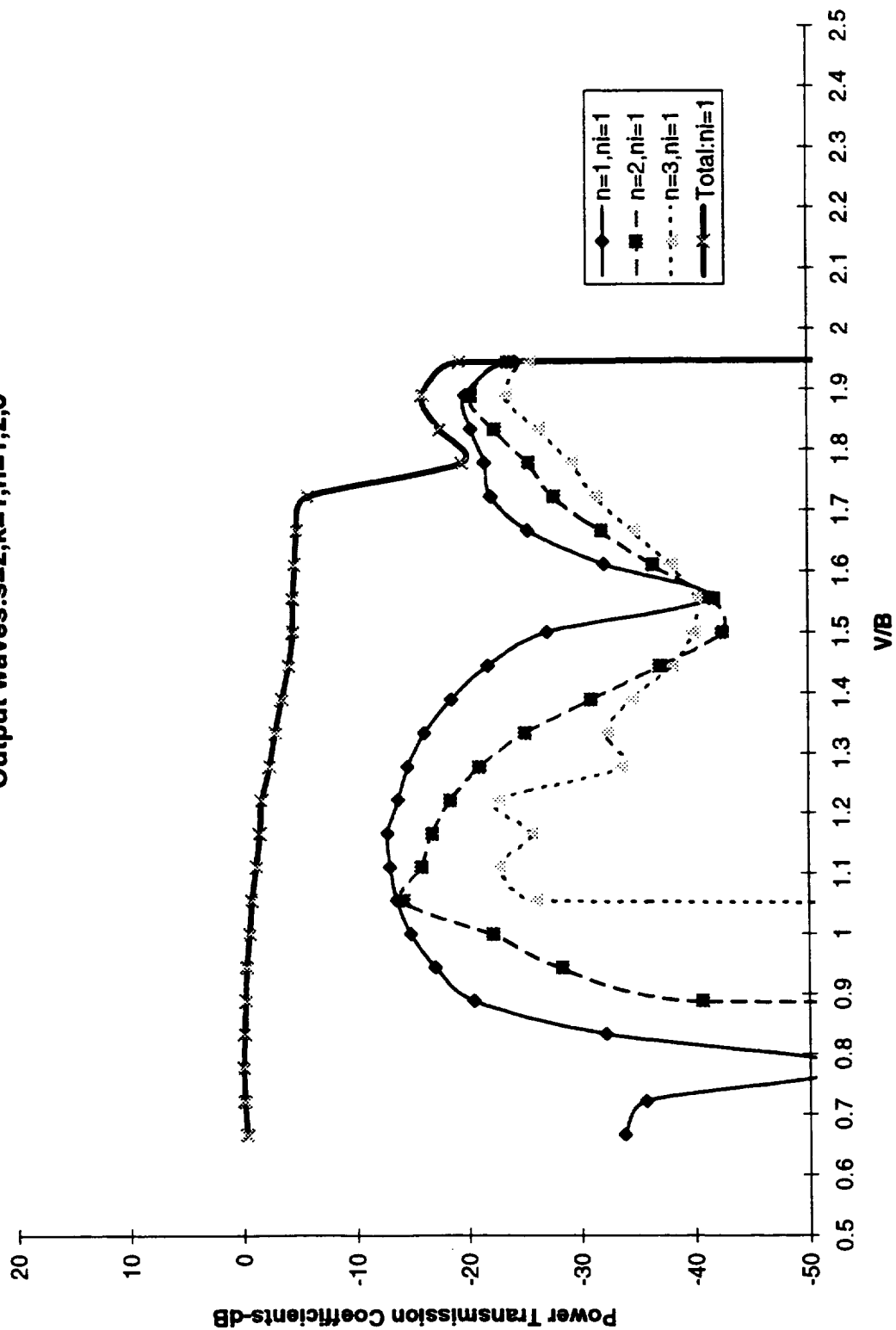
Rotor Transmission-High Speed Case
Input wave: $s_i=2, k_i=2, n_i=1$
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

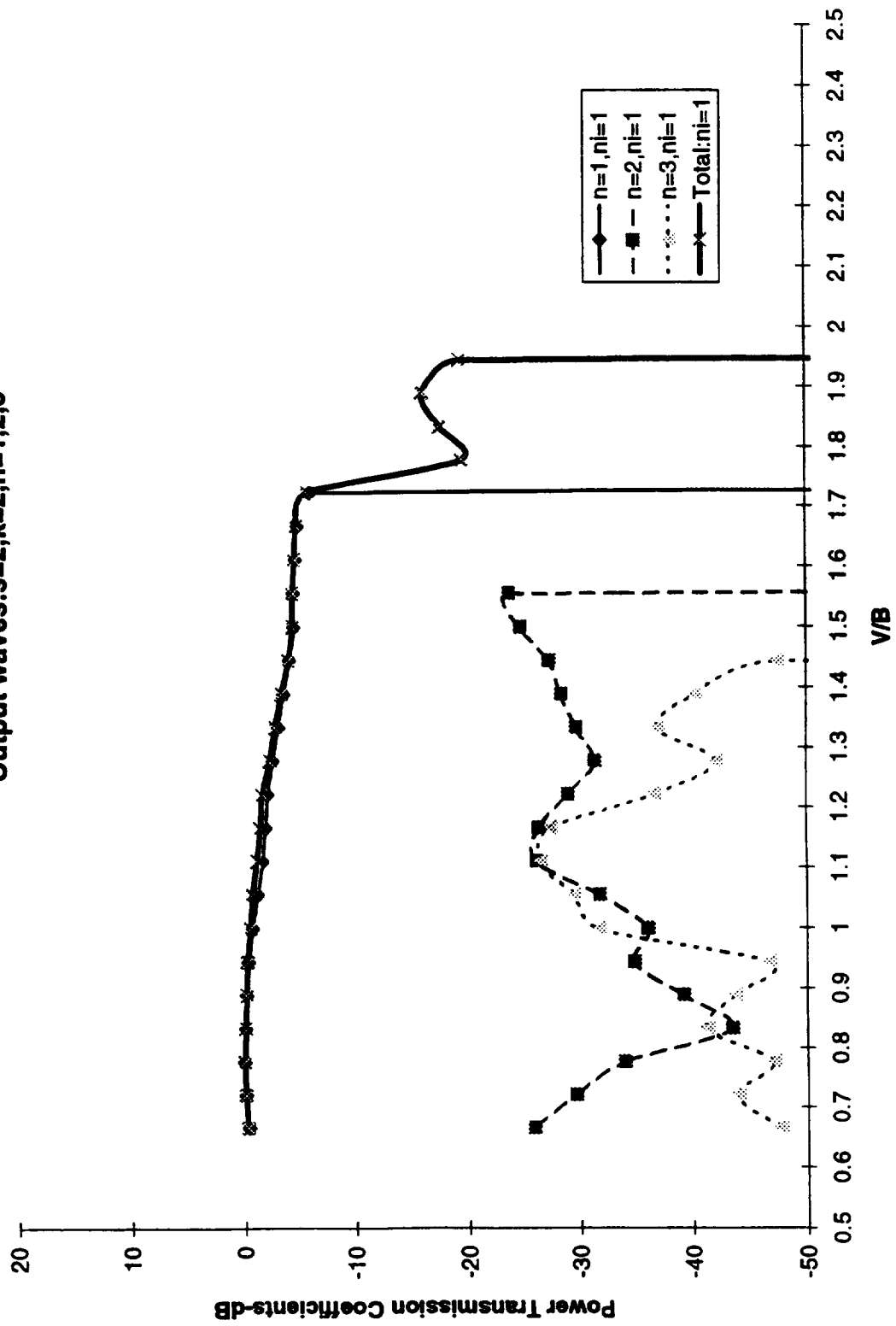
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

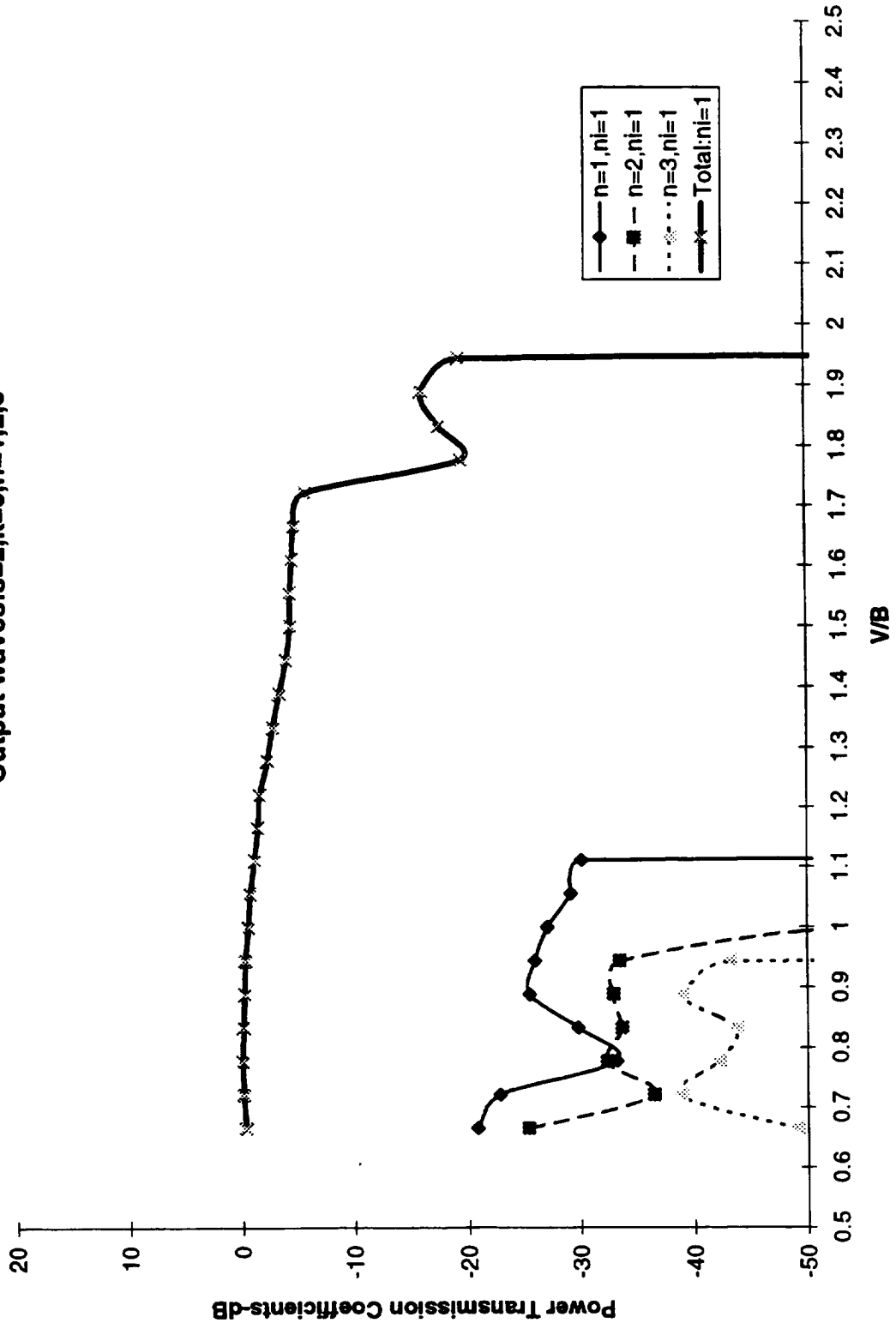
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

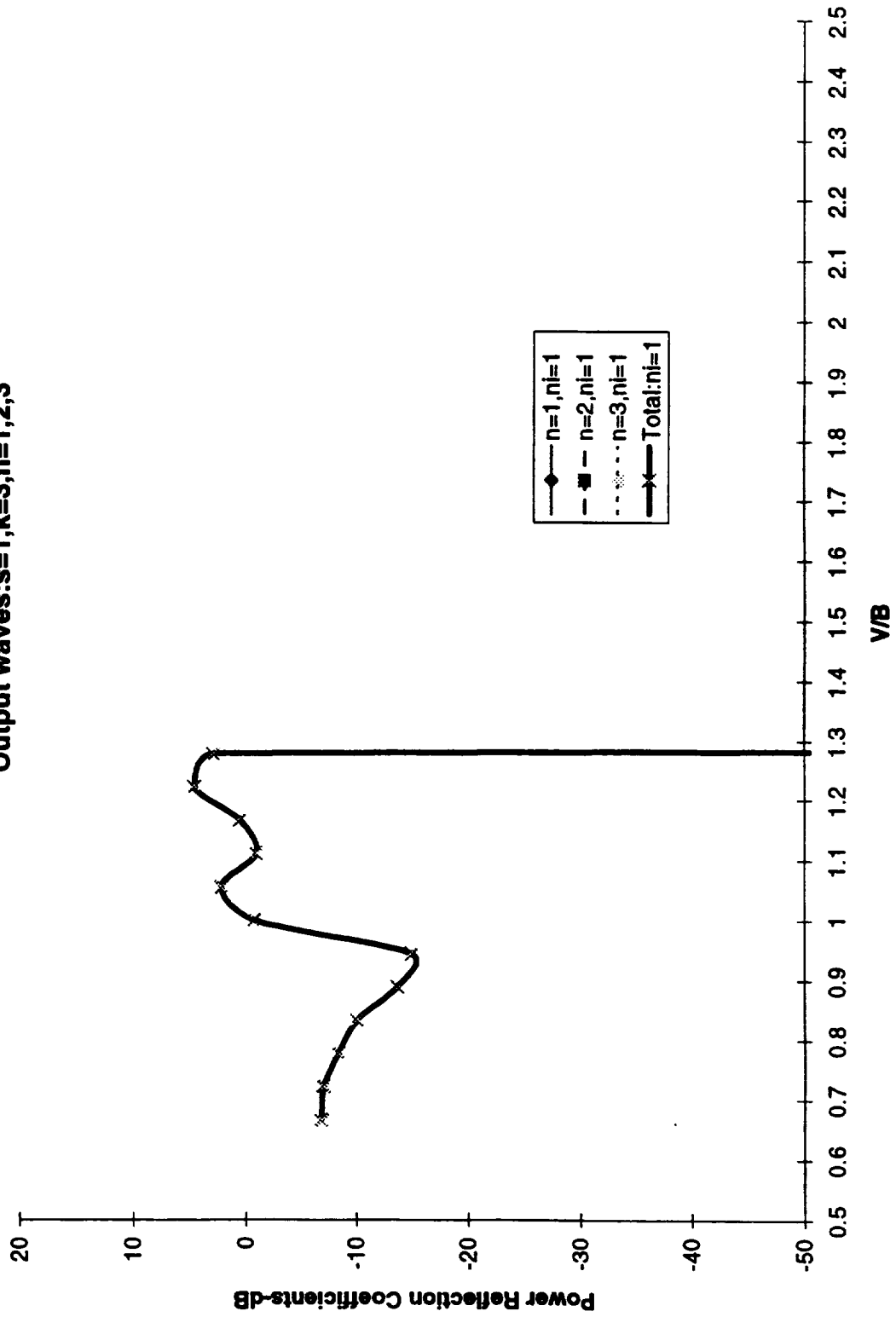
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

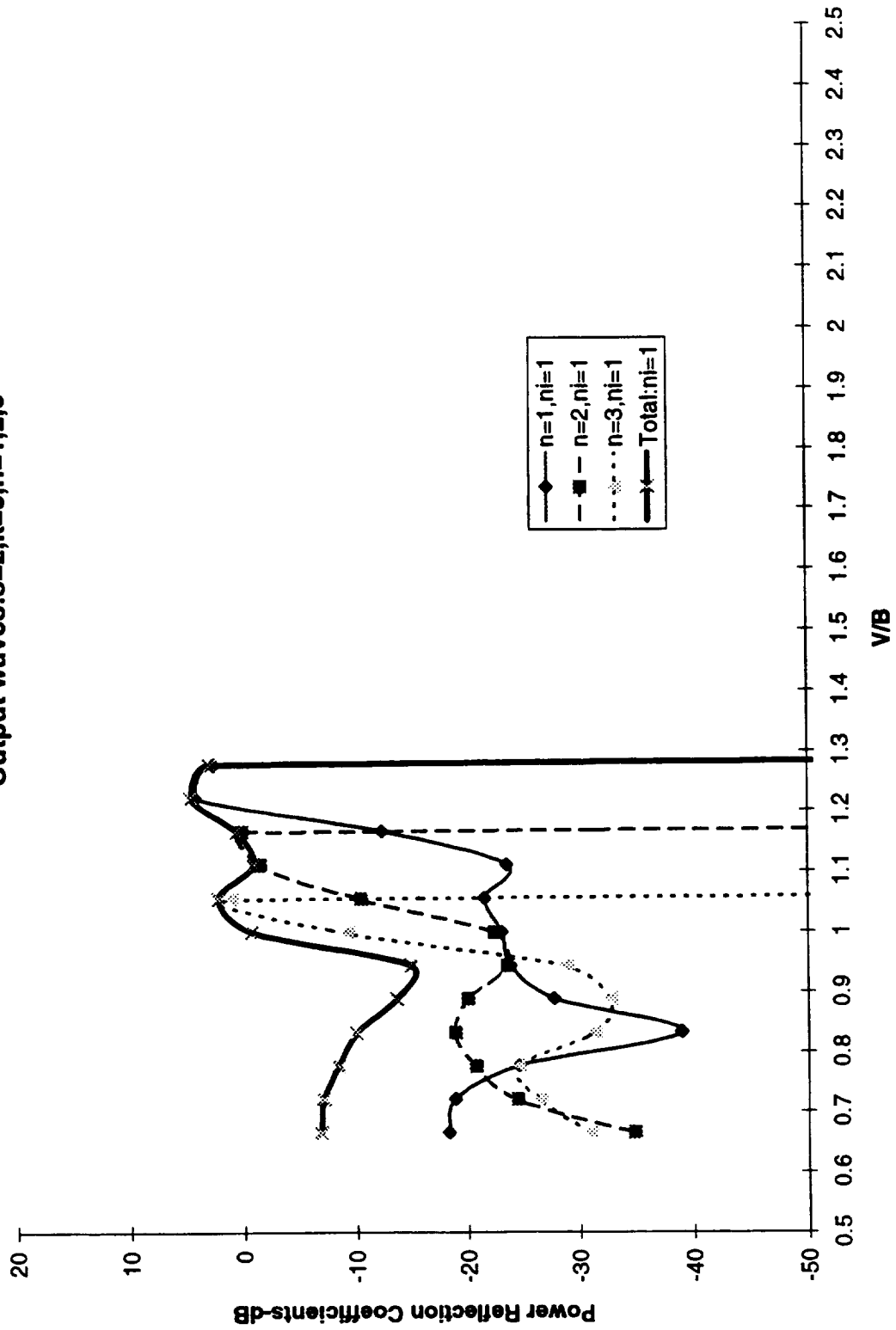
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

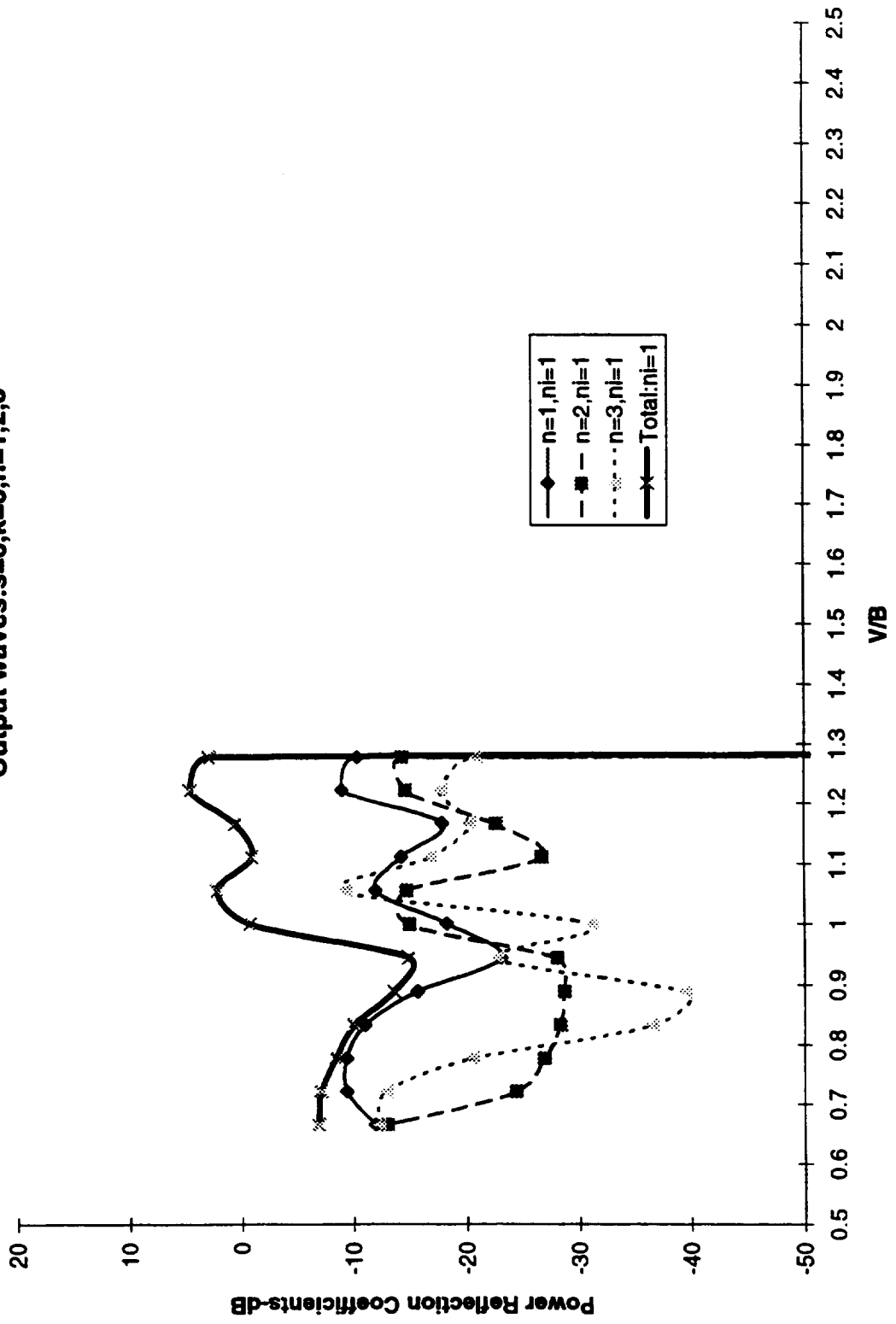
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

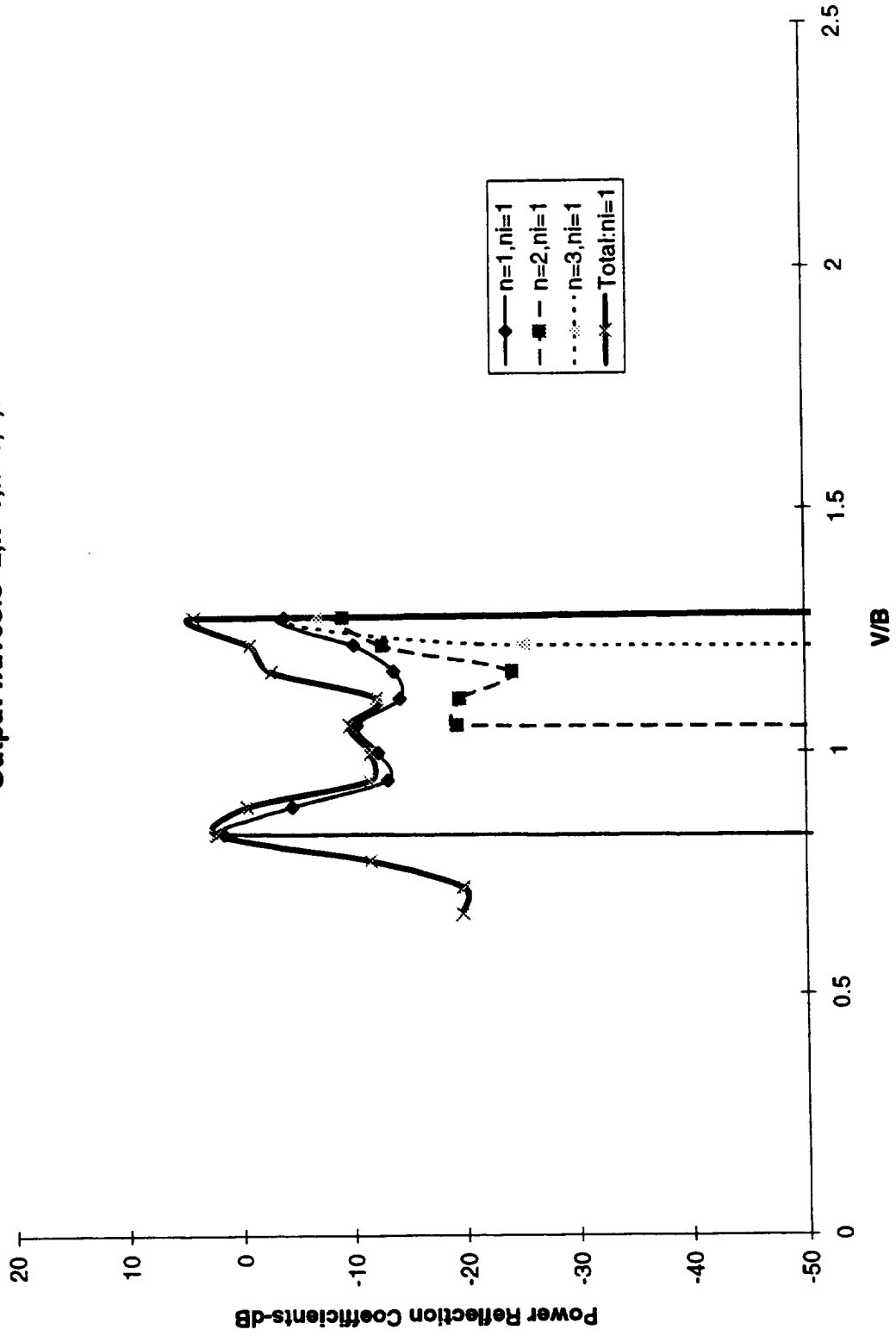
Output wave: $s=3, k=3, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

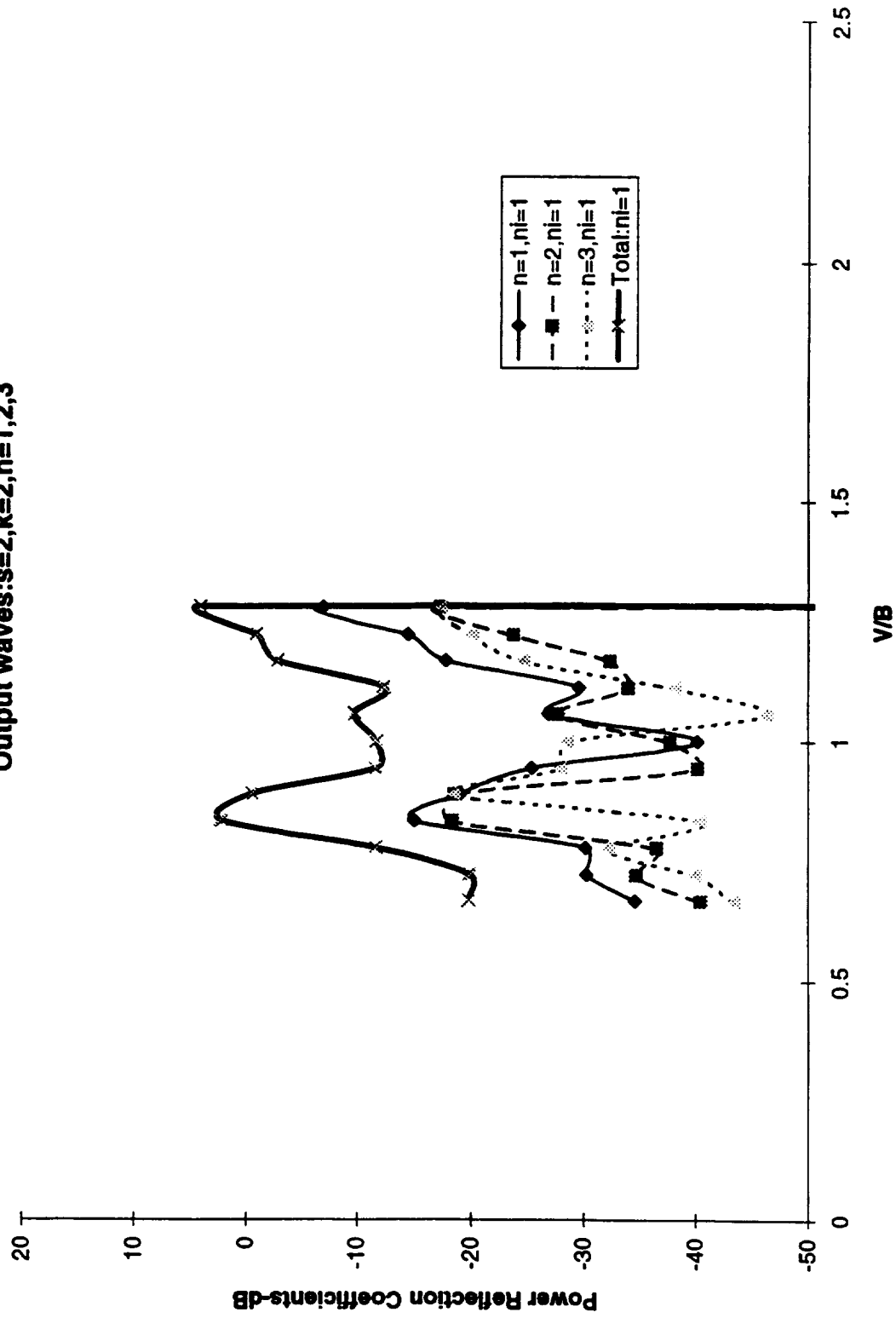
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

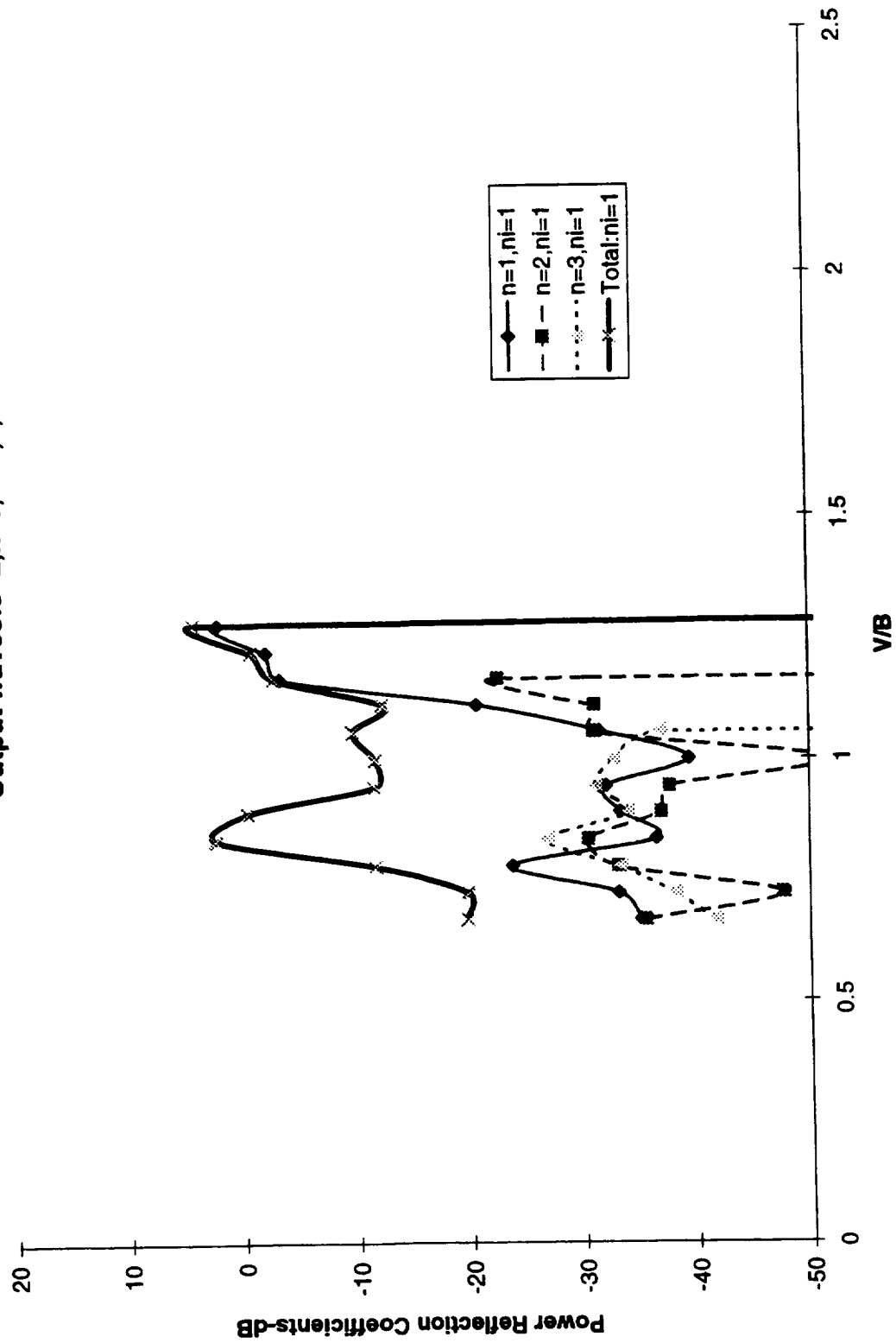
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_l=2, k_l=3, n_l=1$

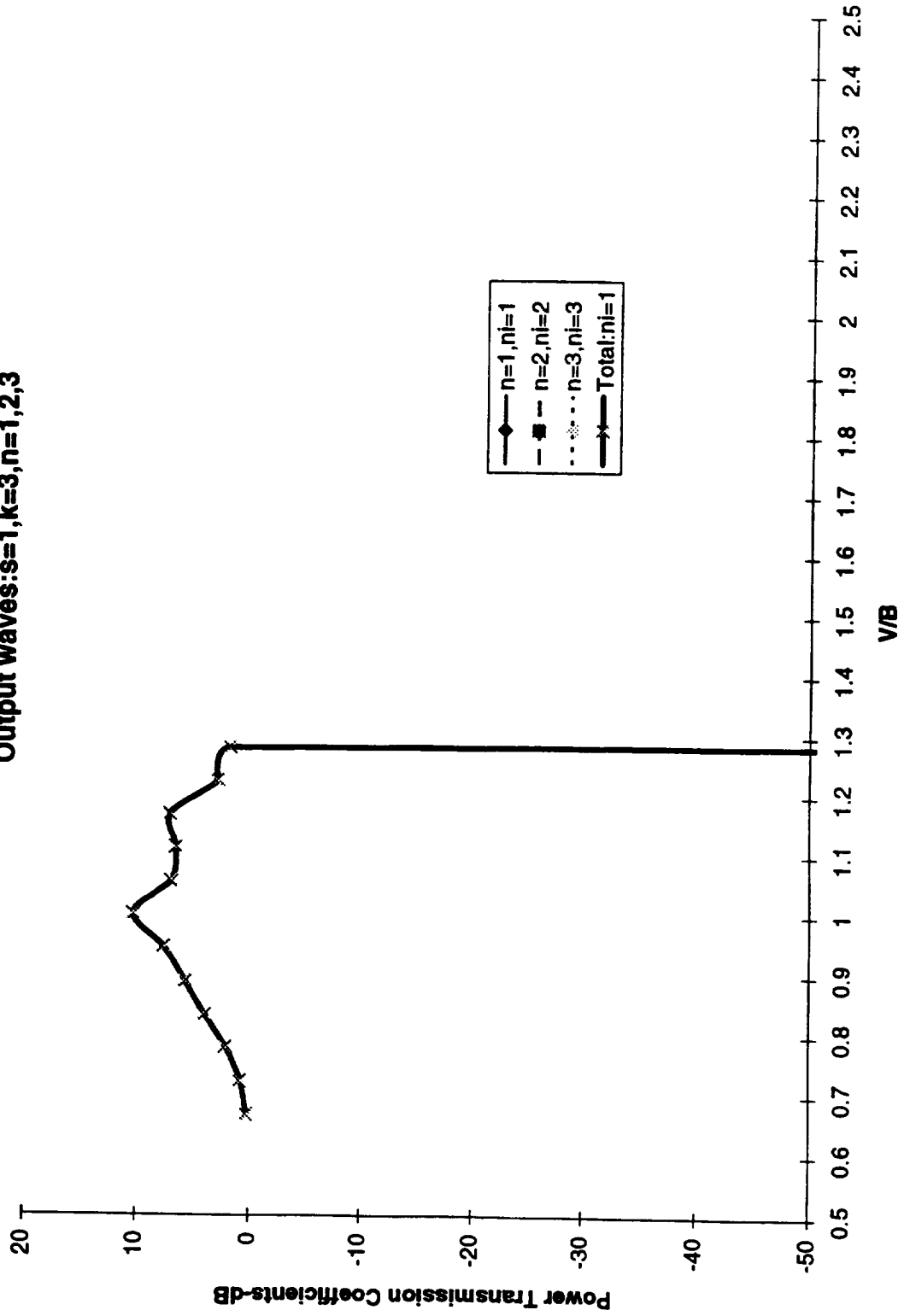
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

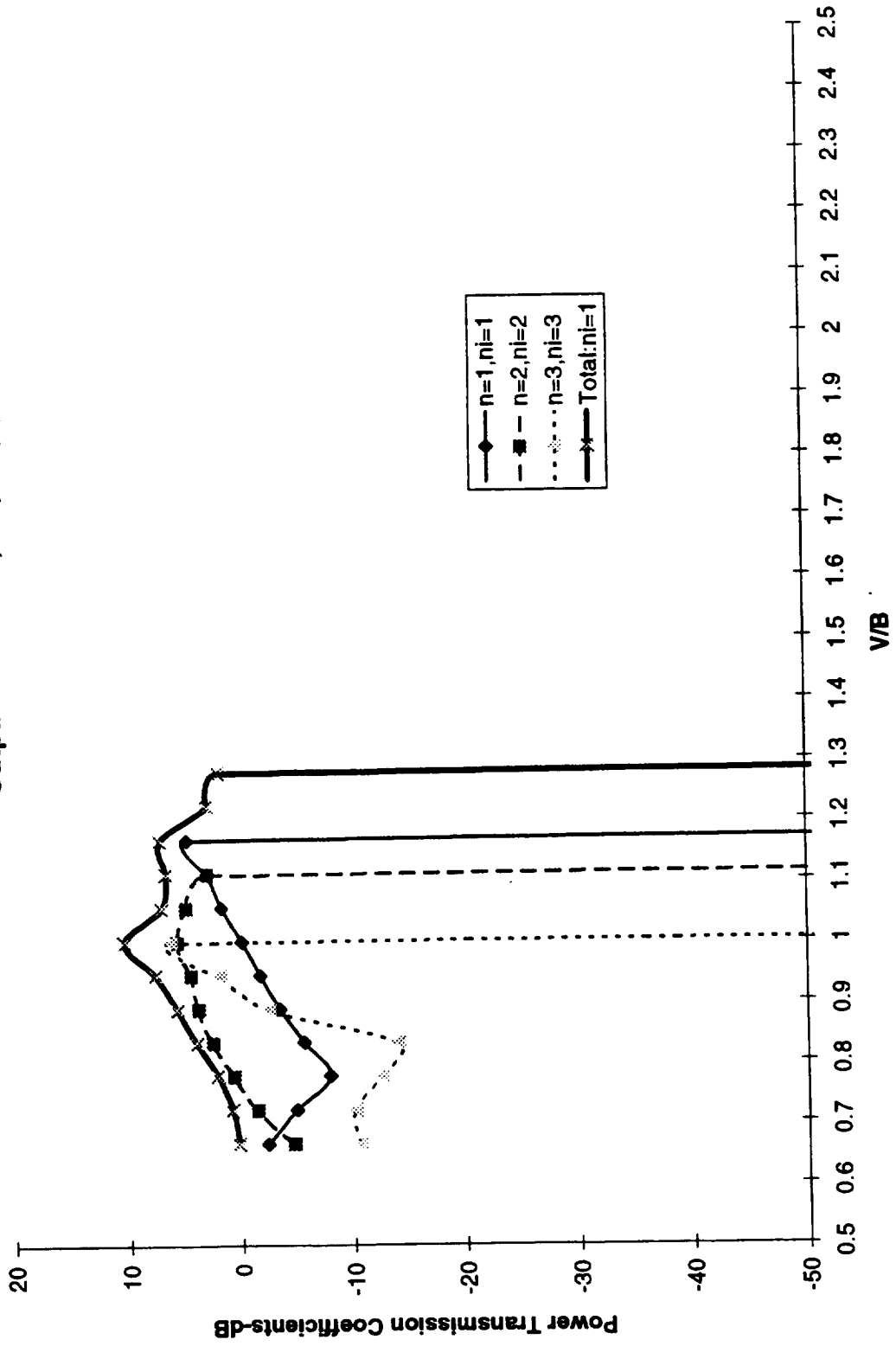
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

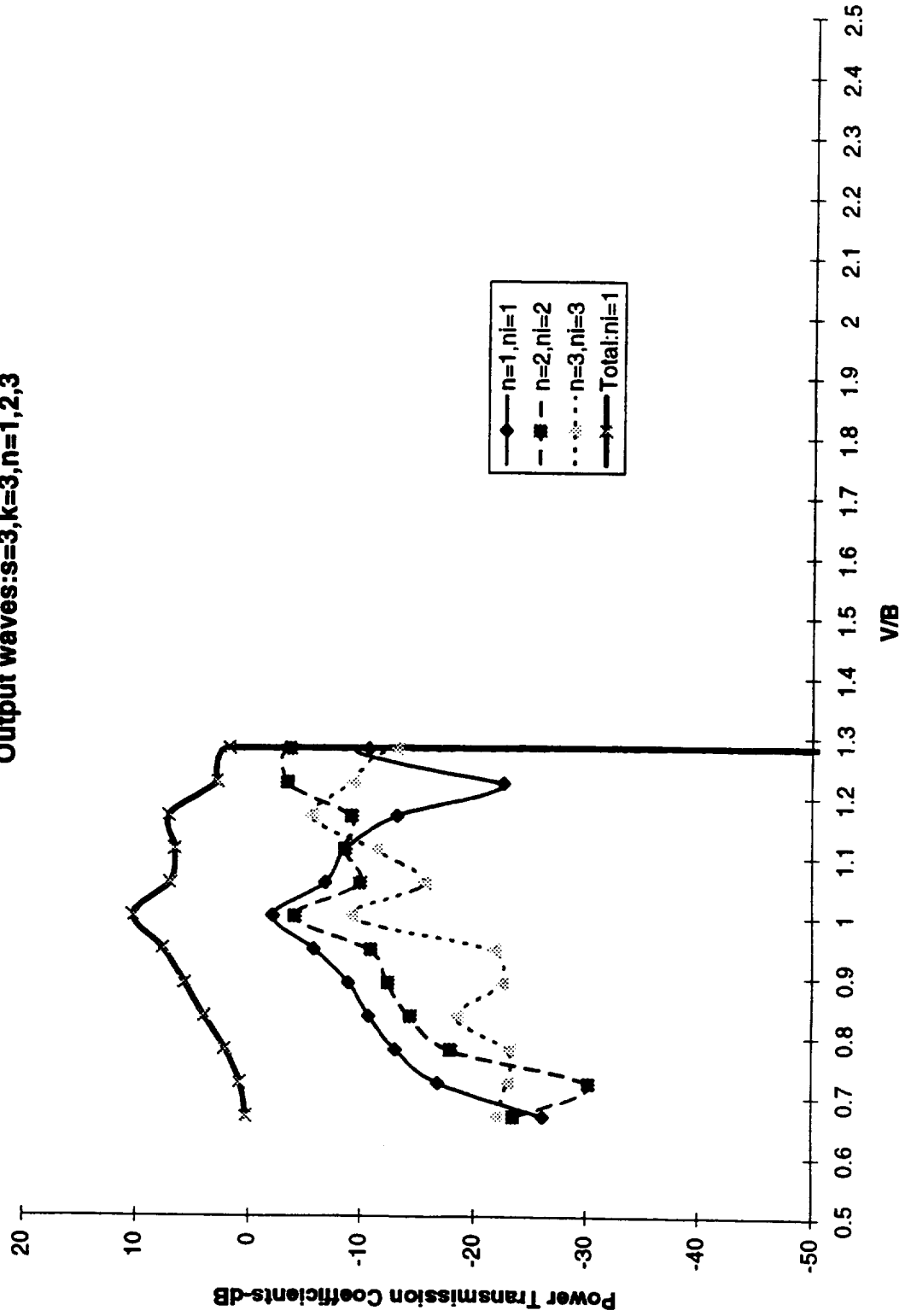
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

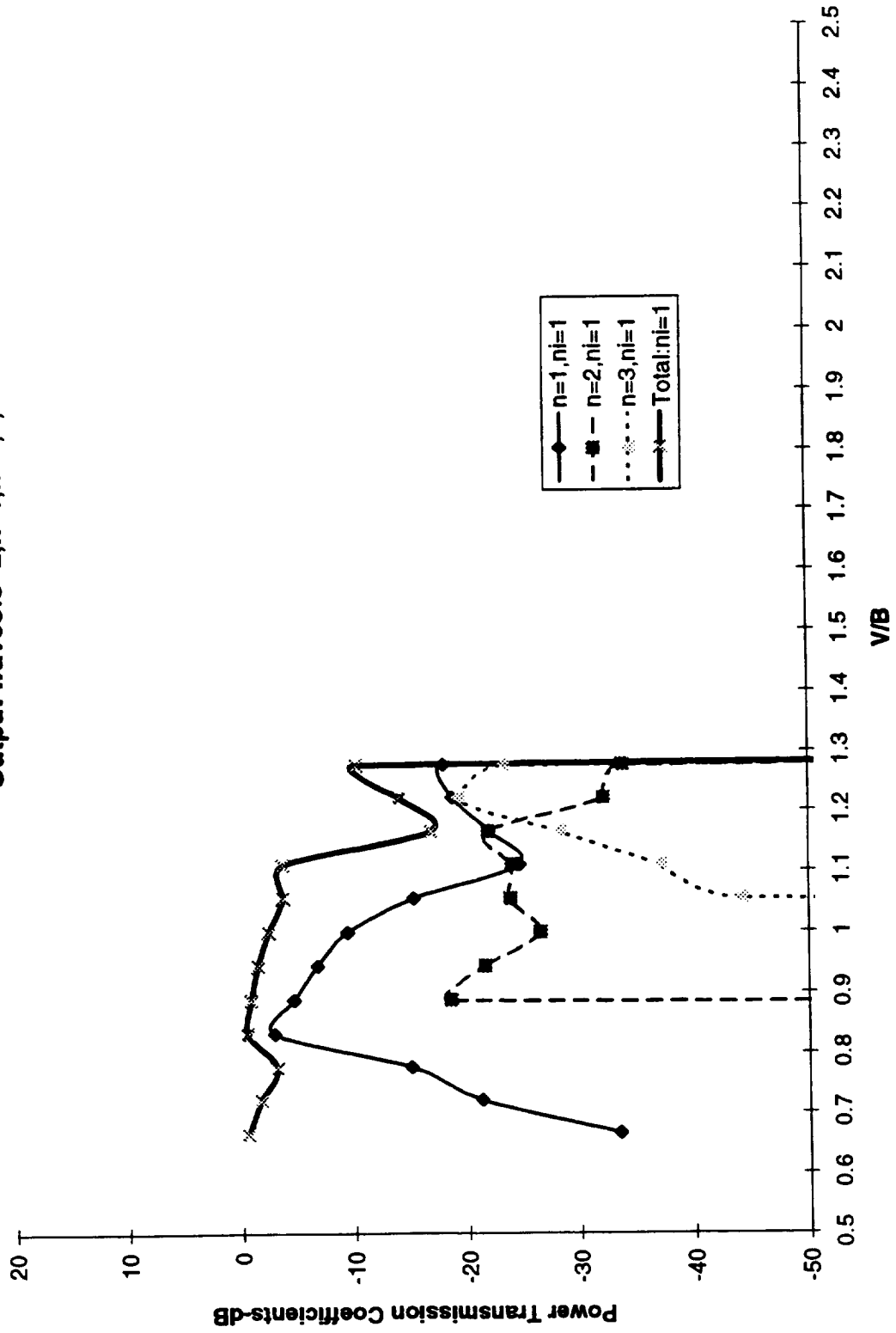
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

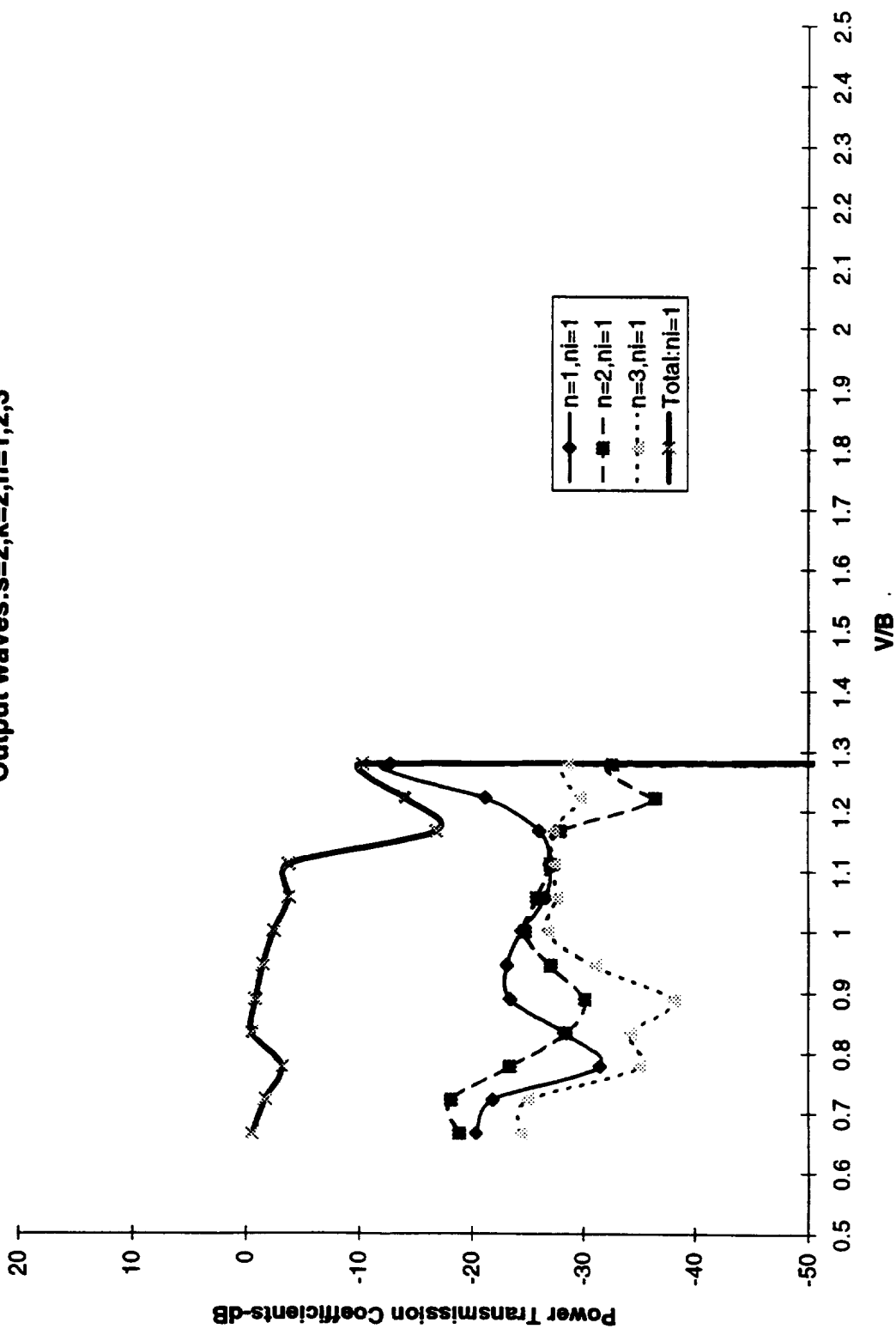
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

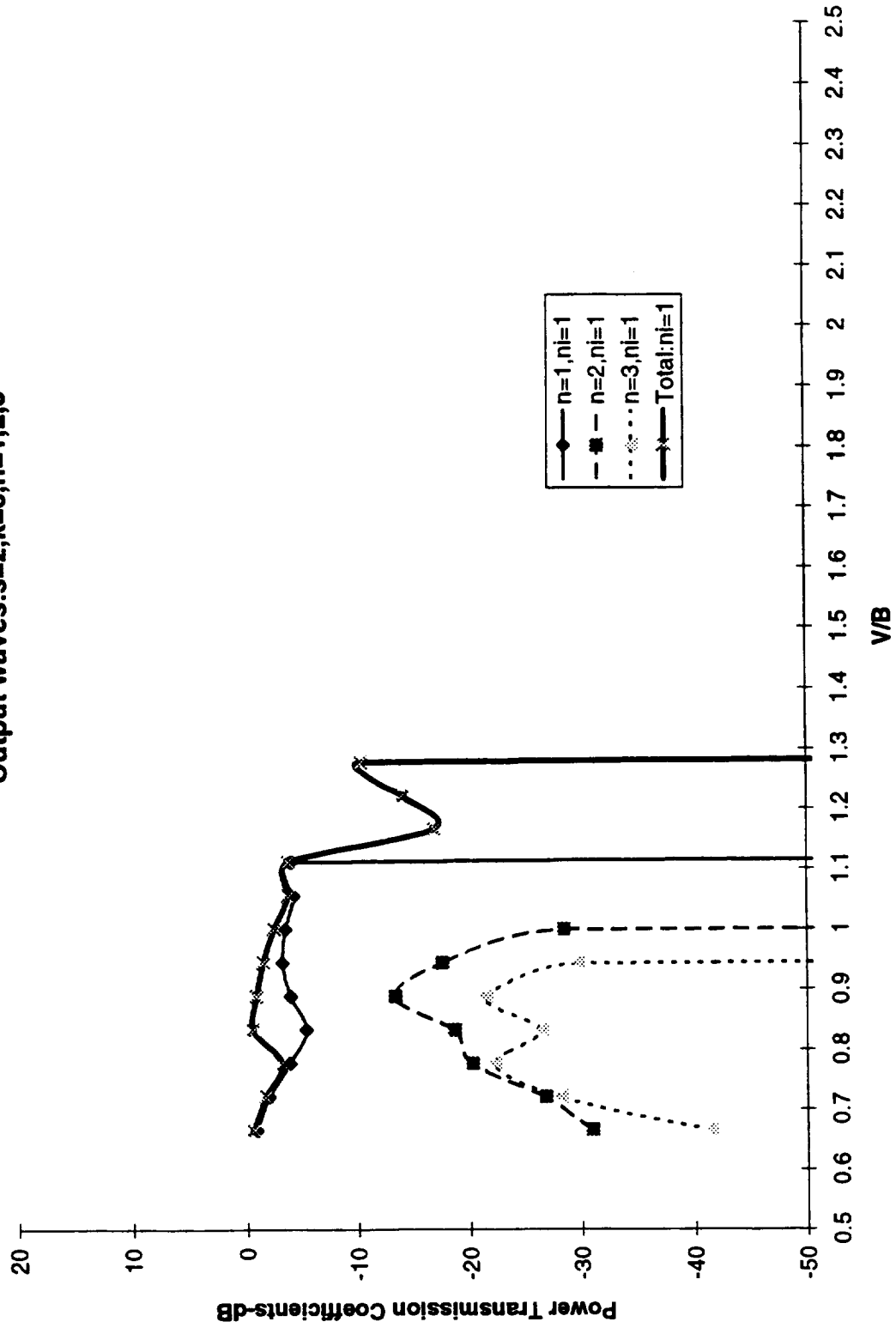
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

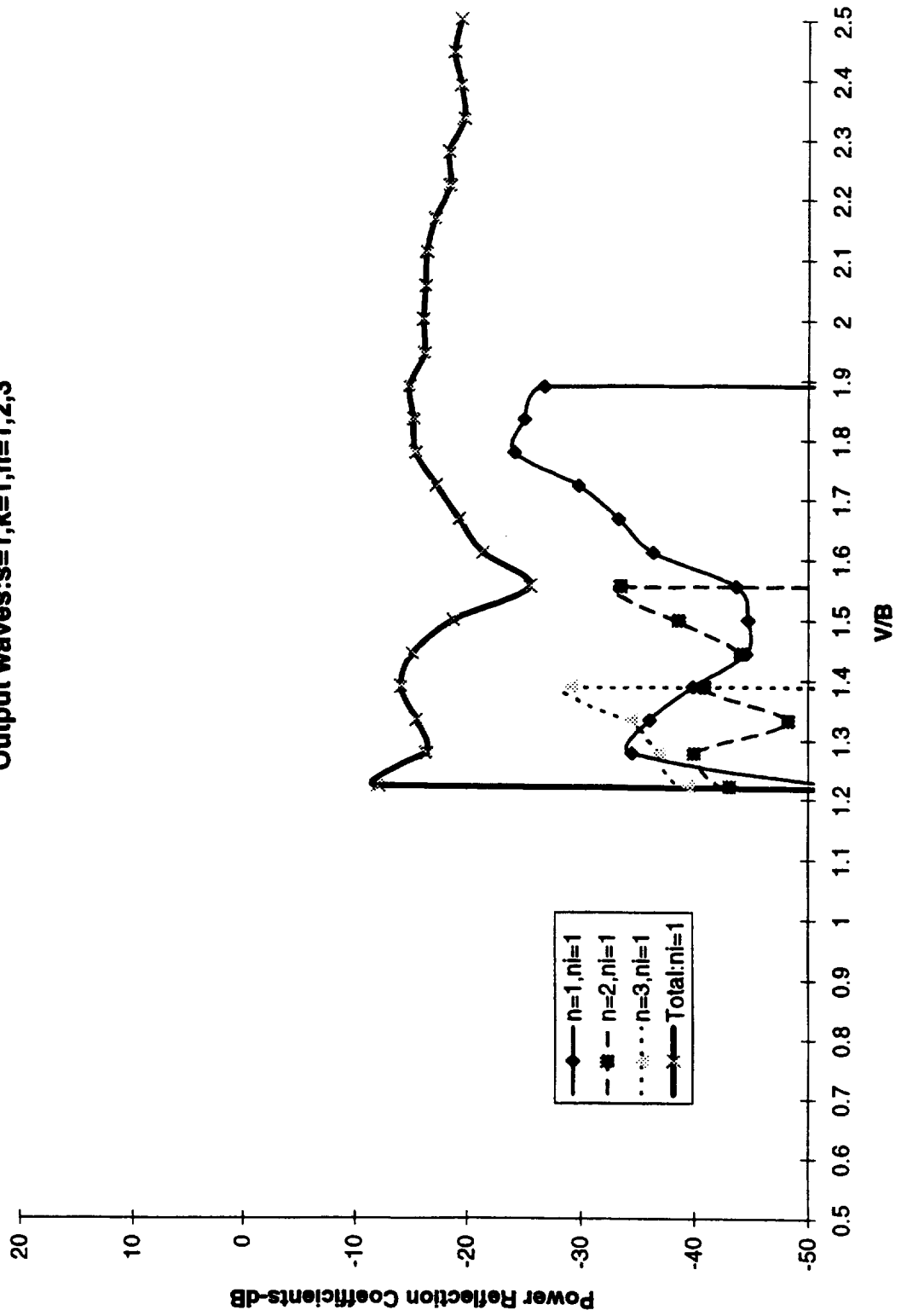
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

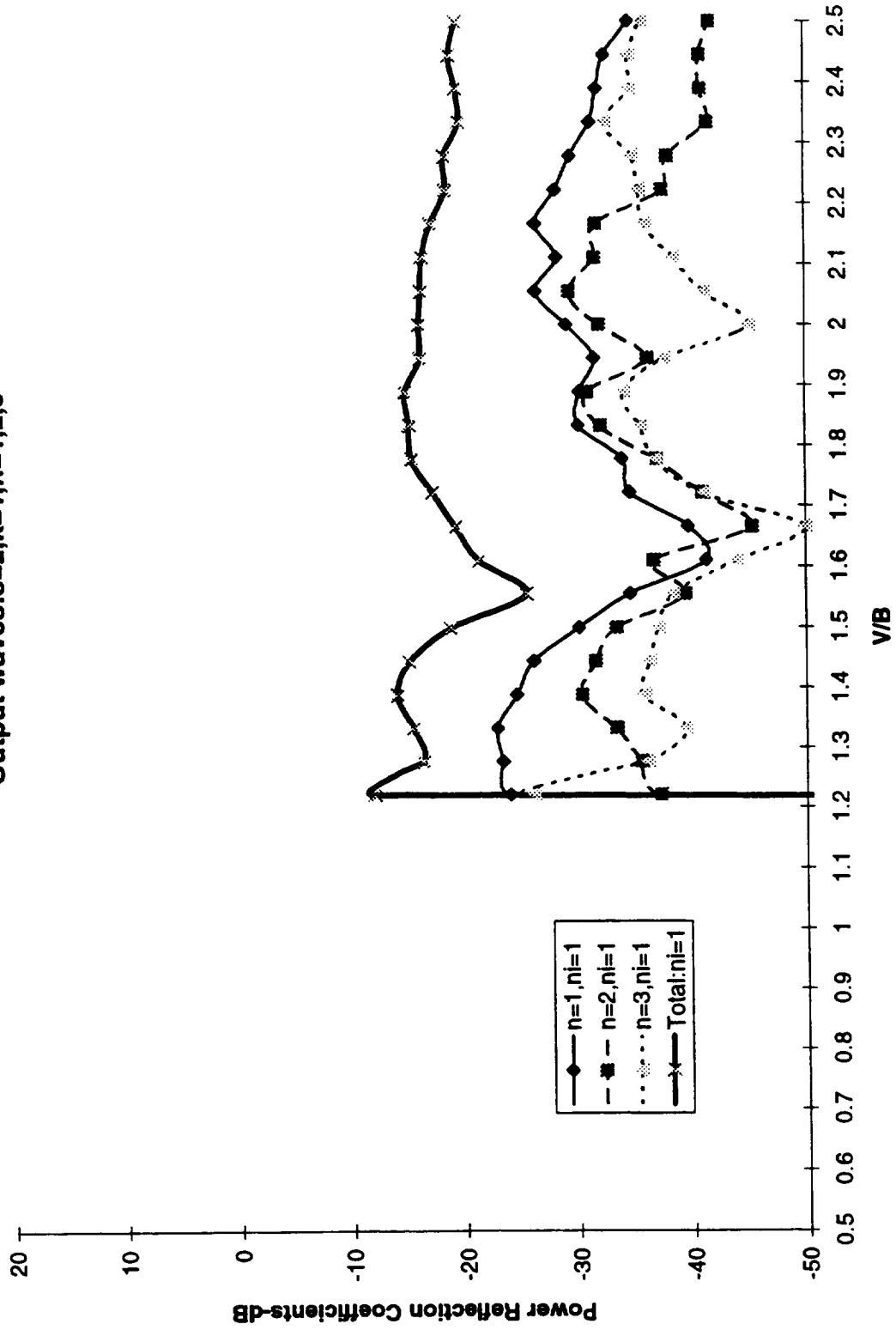
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

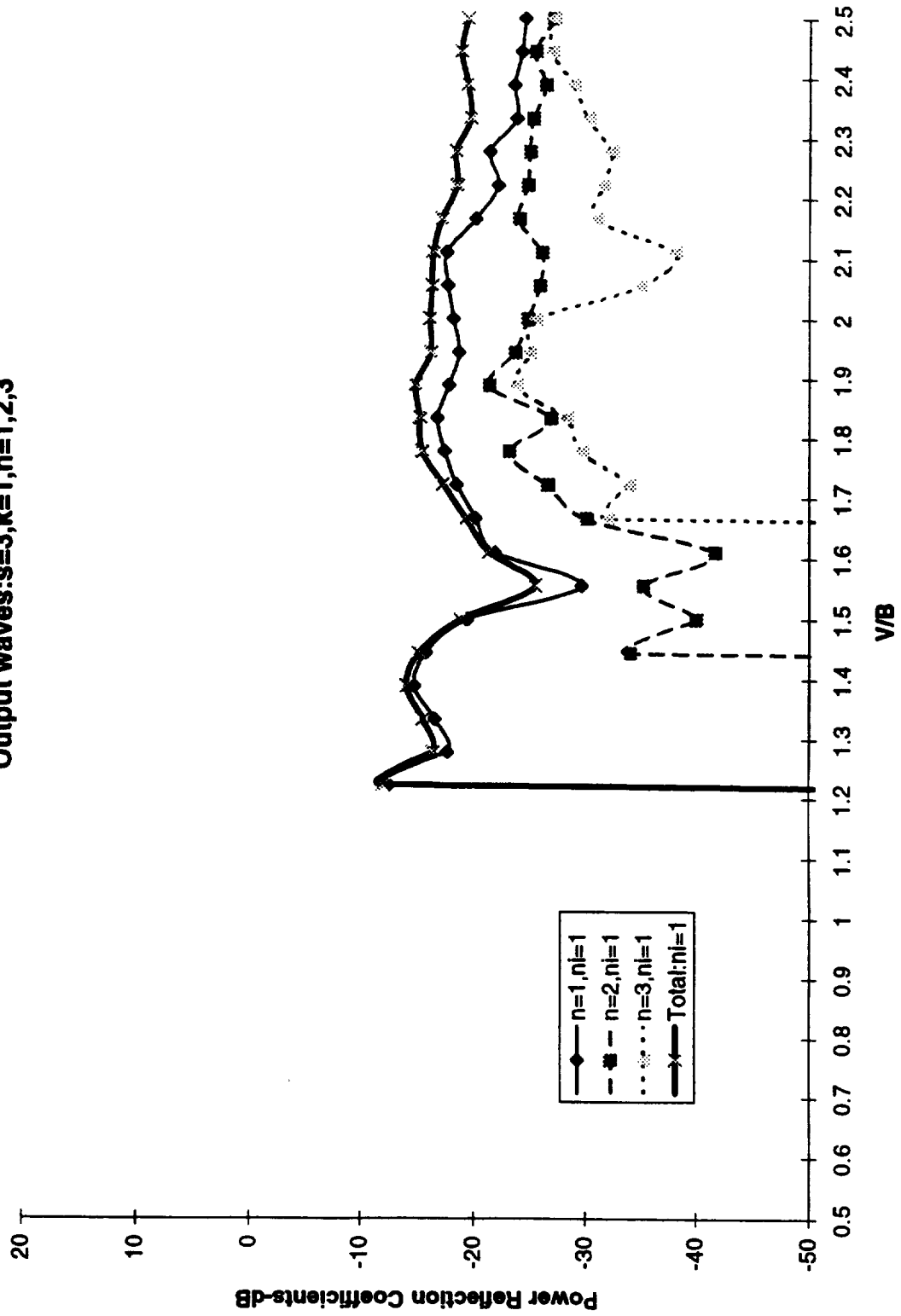
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_l=3, k_l=1, n_l=1$

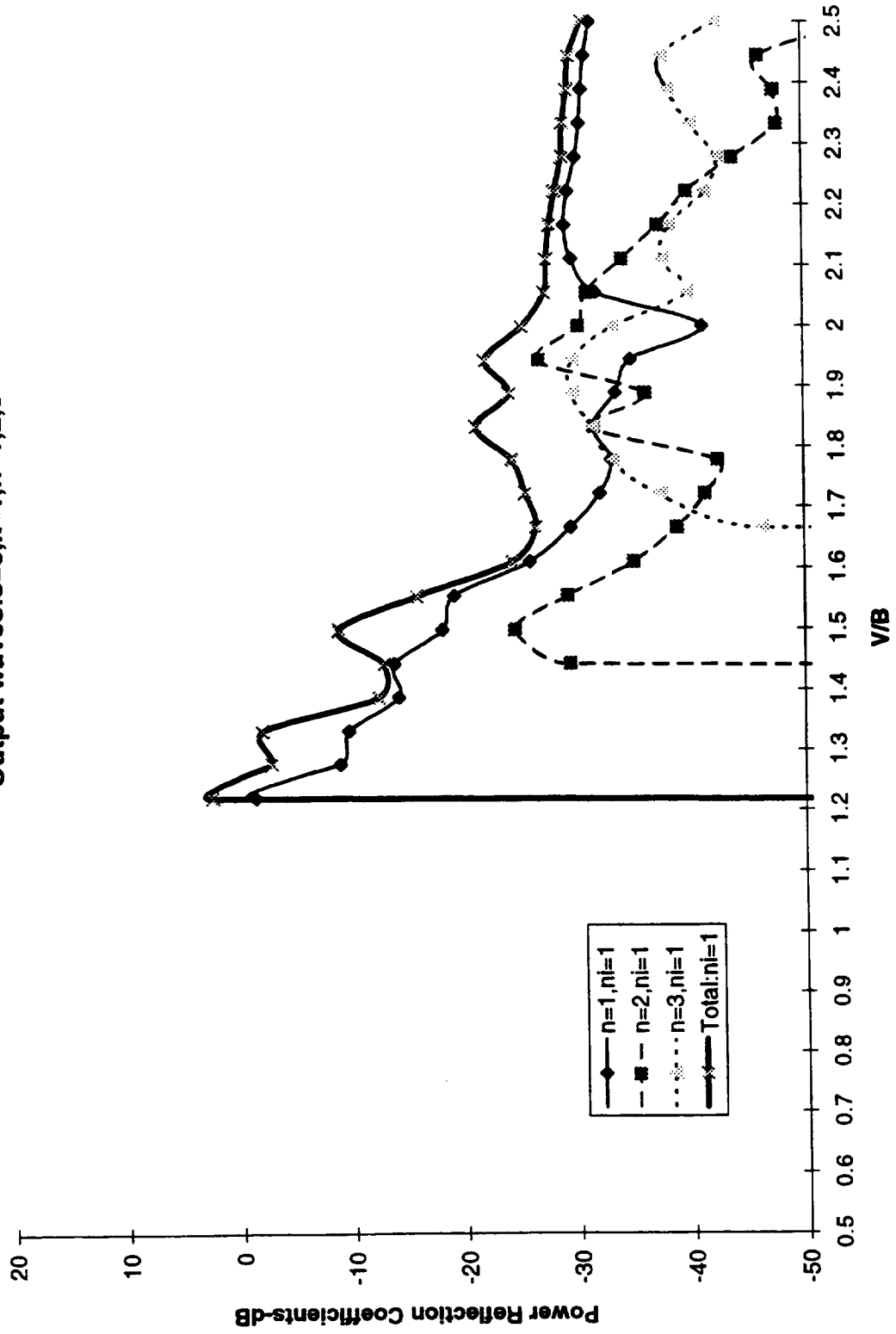
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

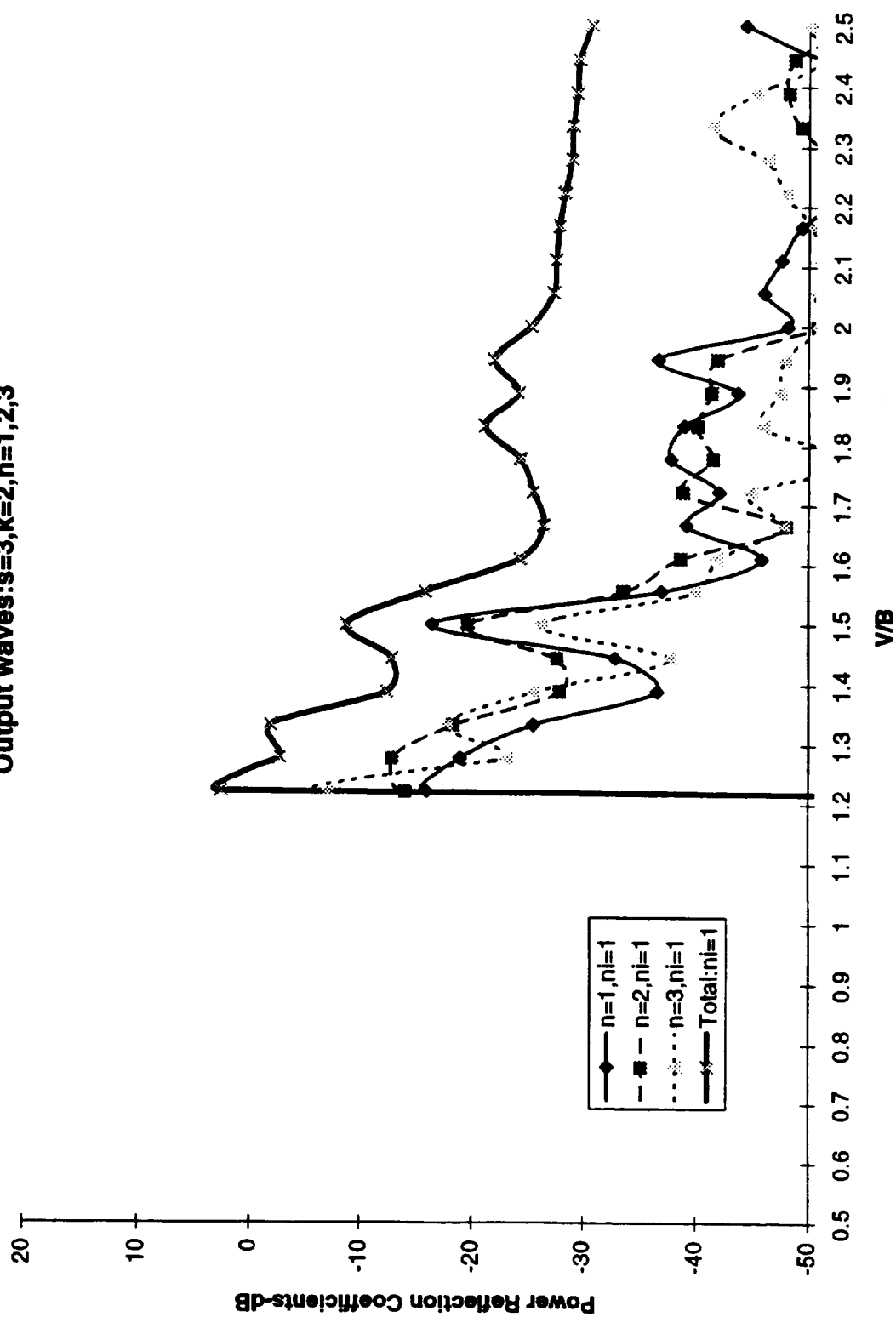
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

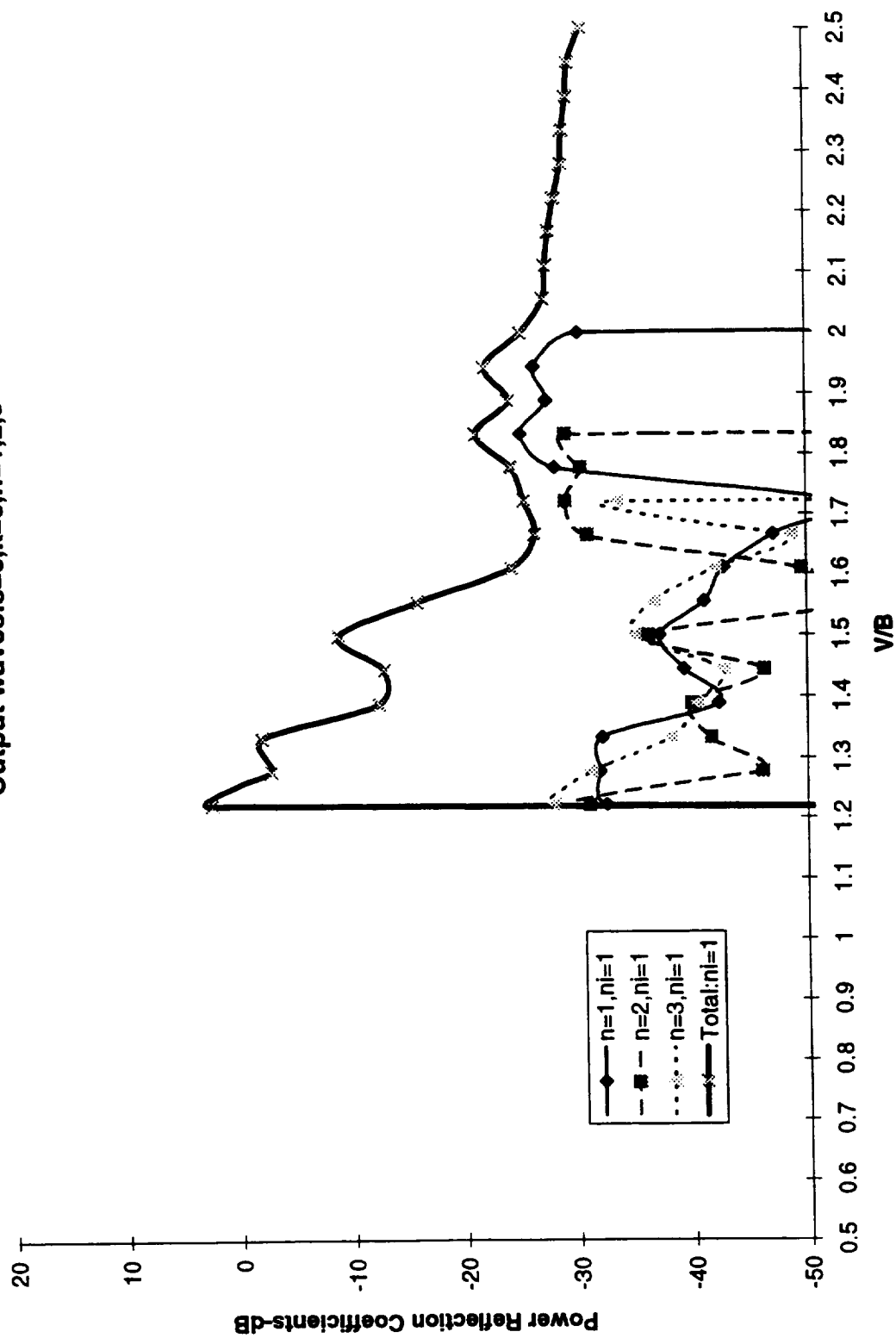
Output waves: $s=3, k=2, n=1, 2, 3$



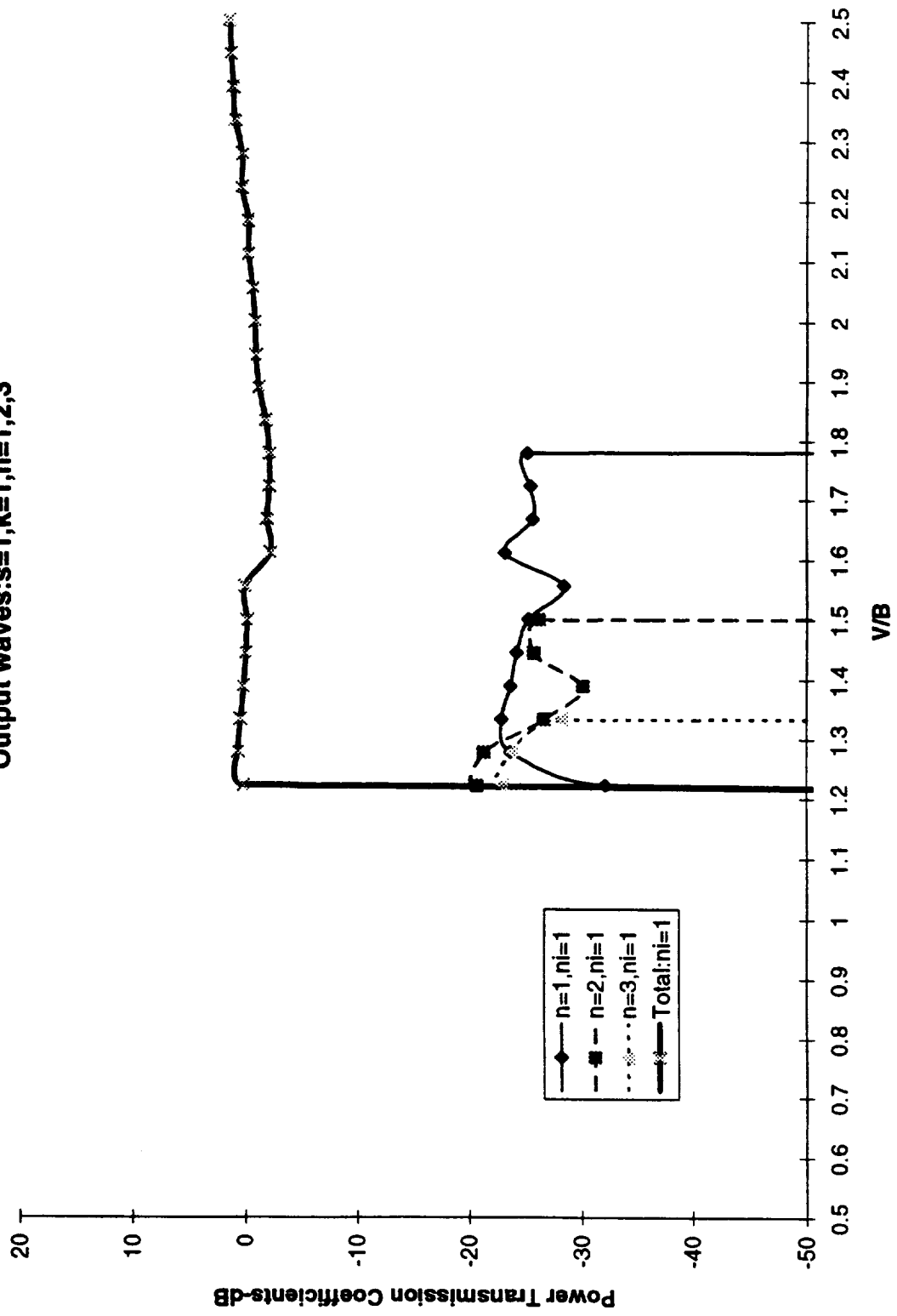
Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

Output waves: $s=3, k=3, n=1, 2, 3$



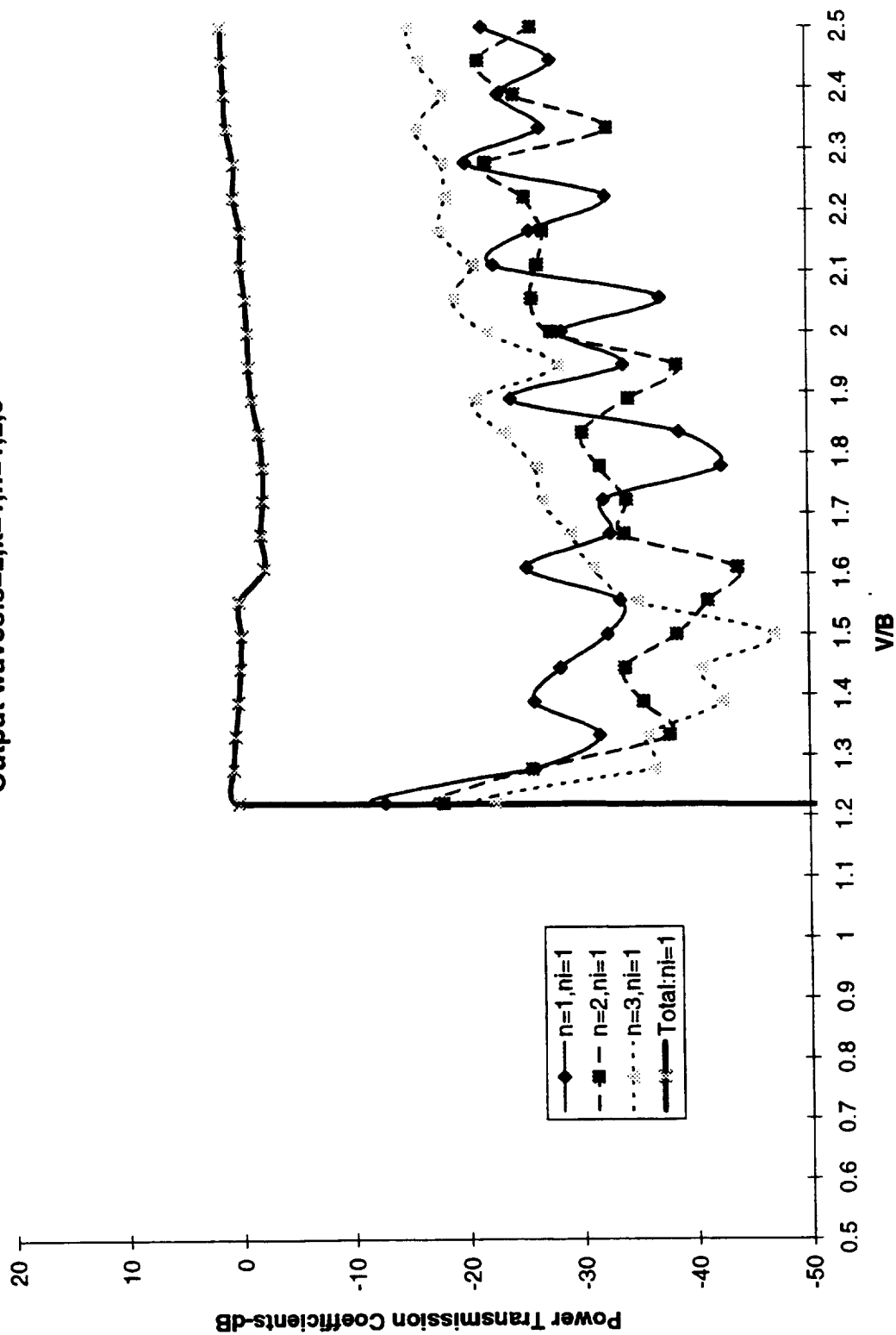
Rotor Transmission-High Speed Case
Input wave: $s_l=3, k_l=1, n_l=1$
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

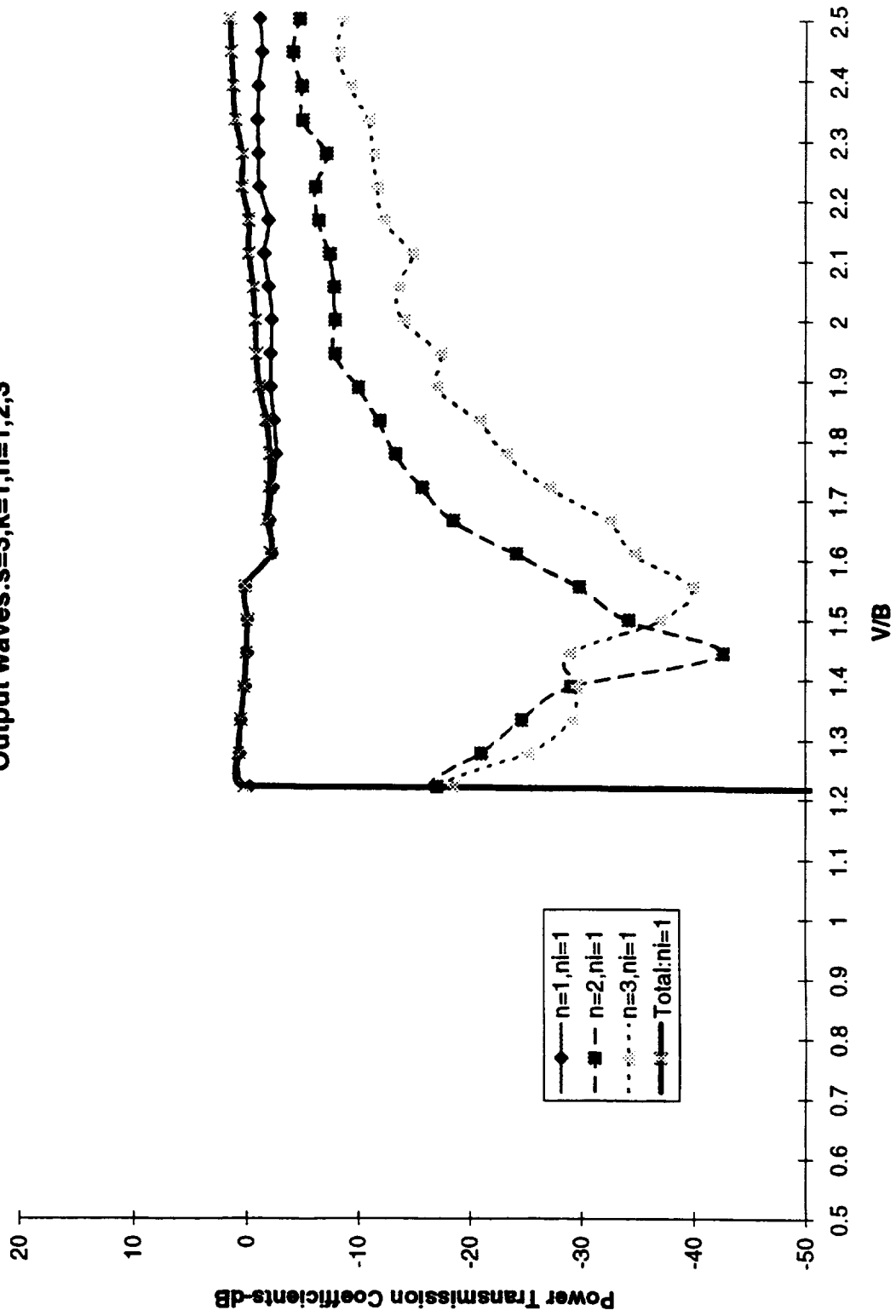
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

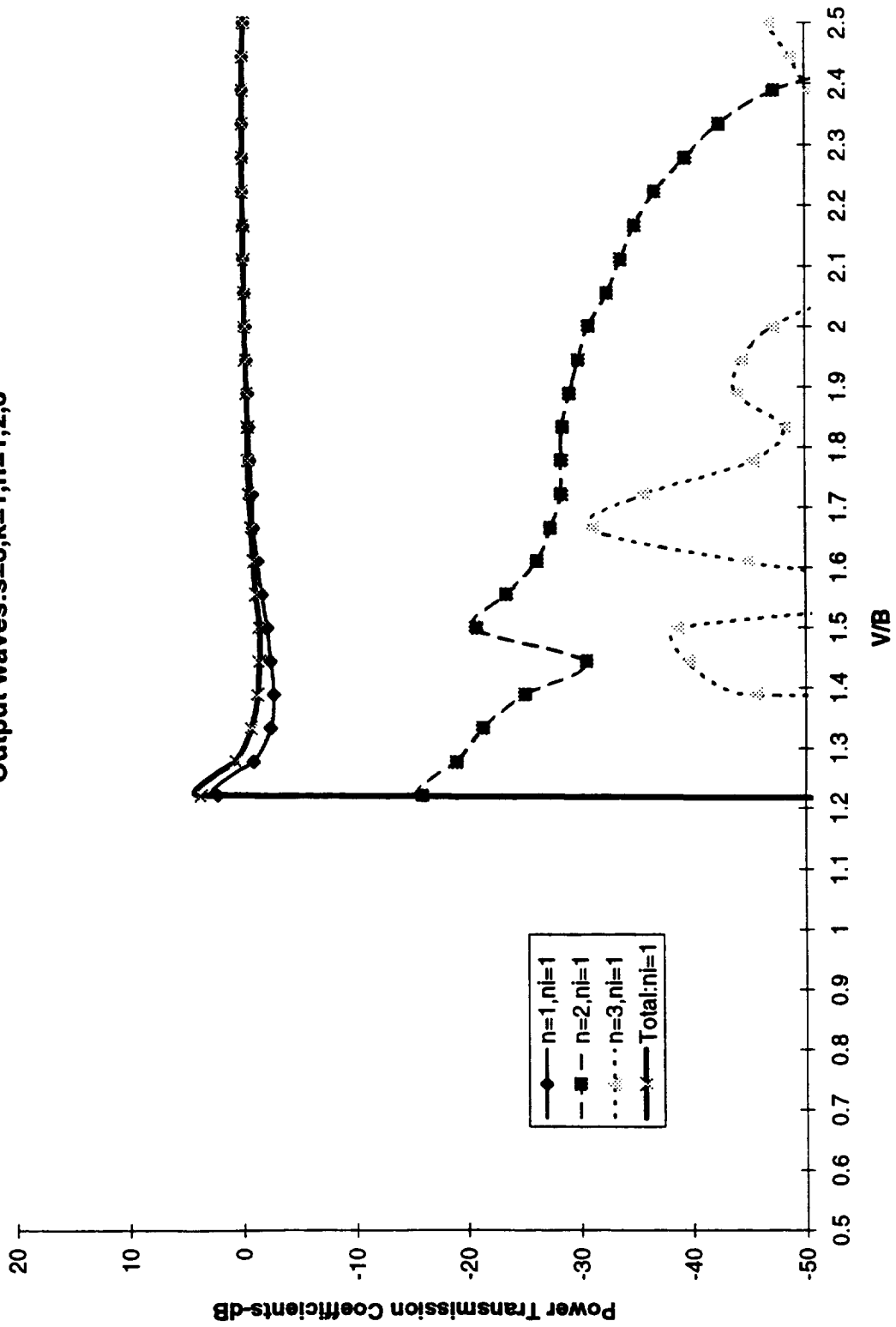
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

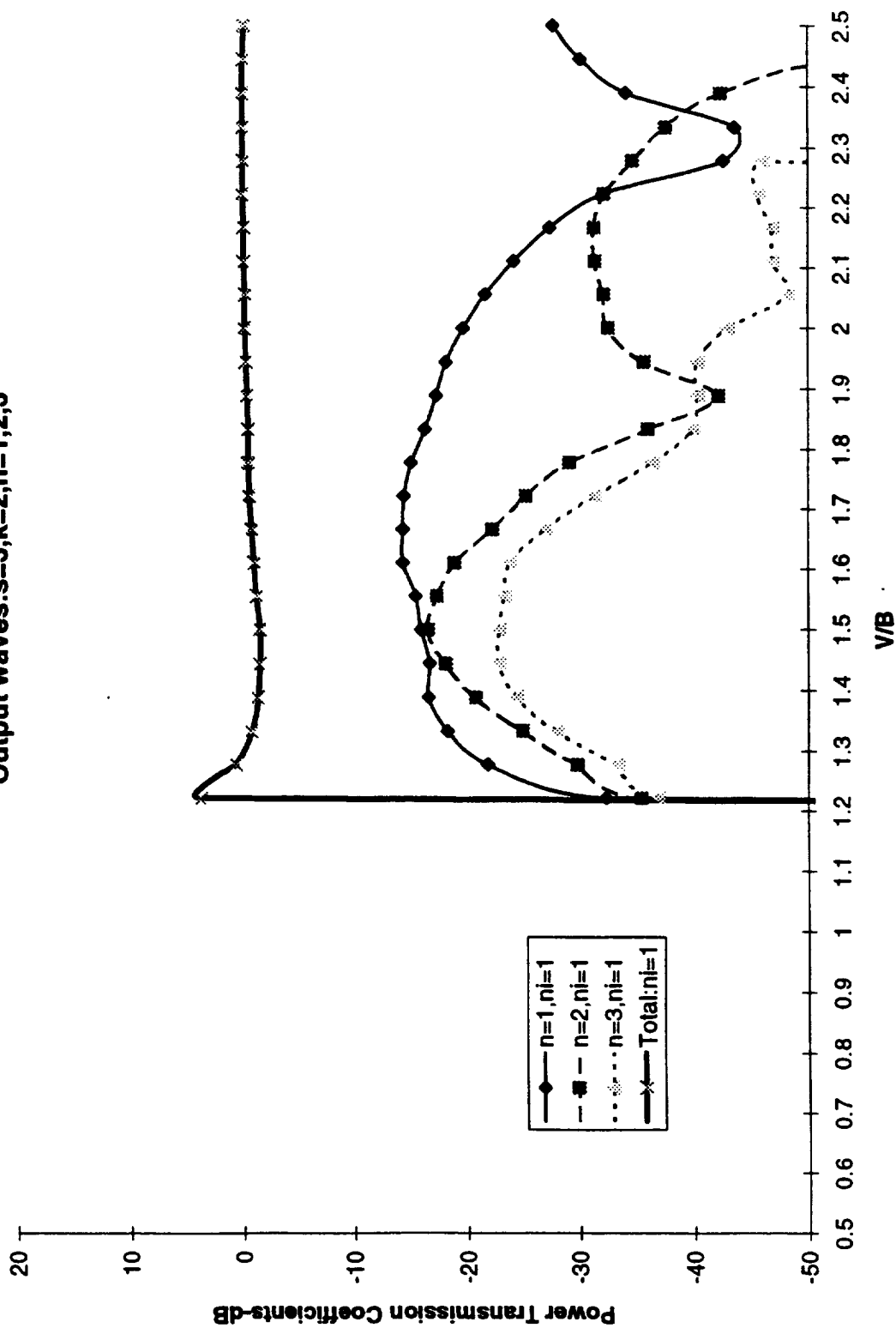
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

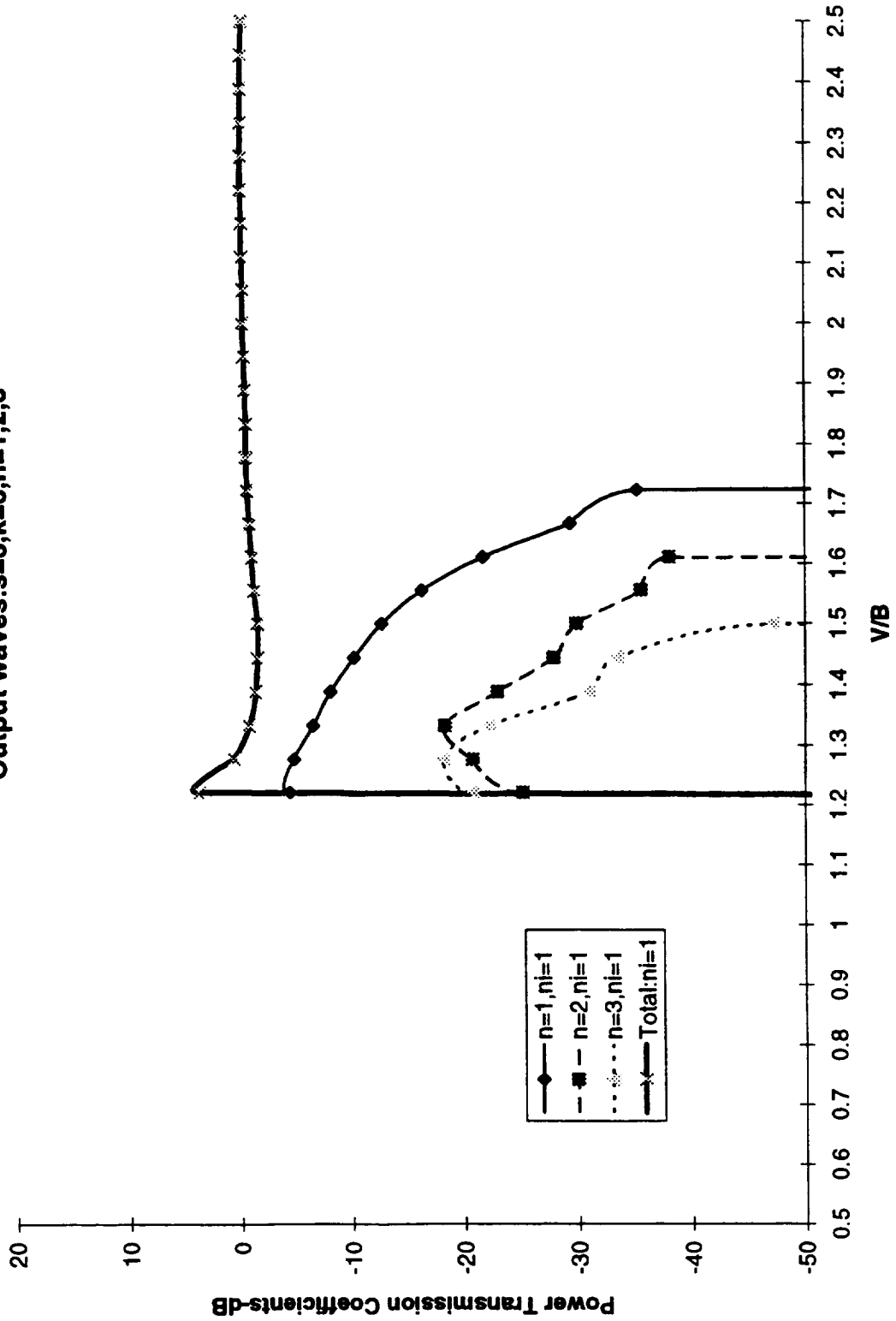
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

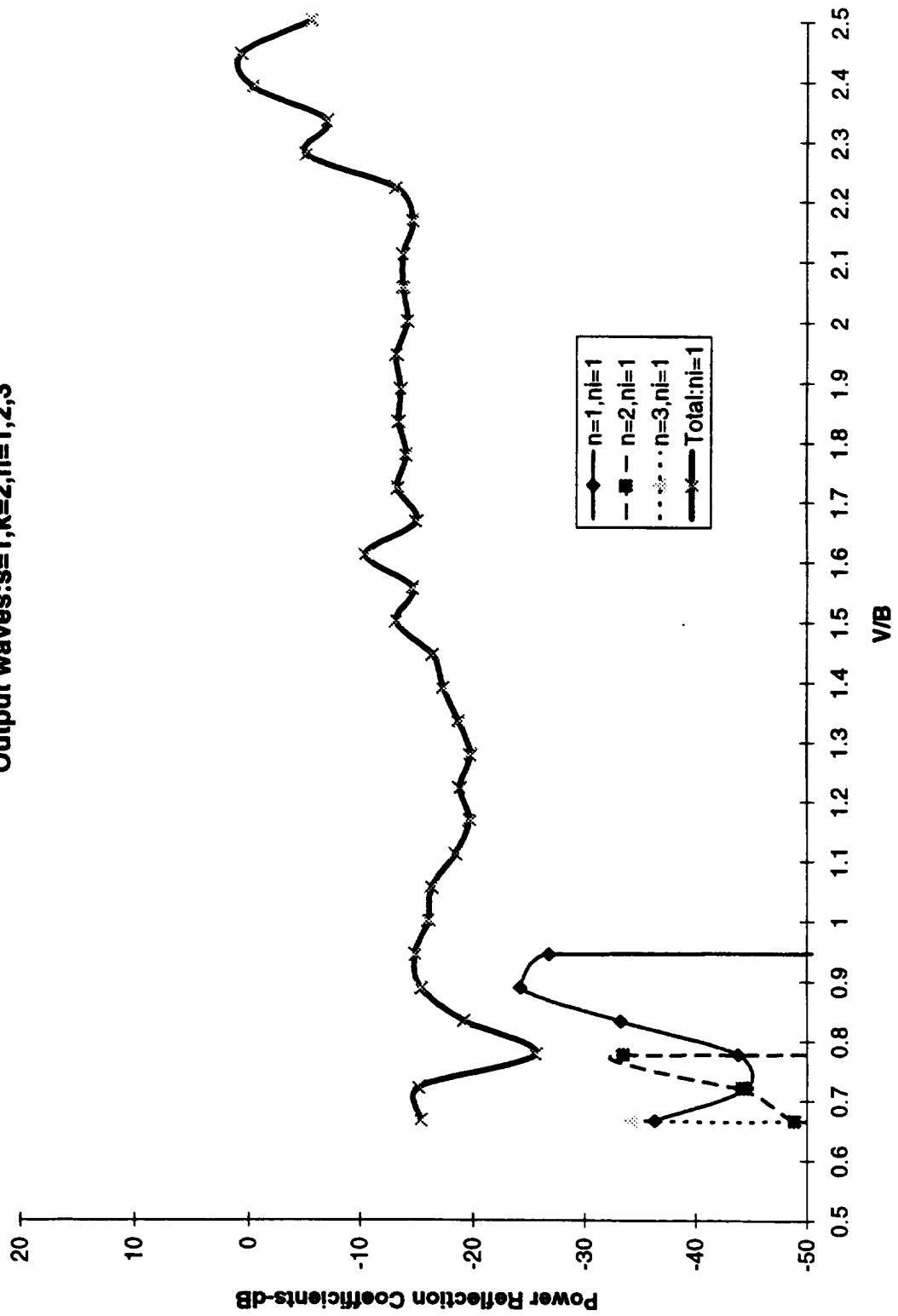
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_l=3, k_l=2, n_l=1$

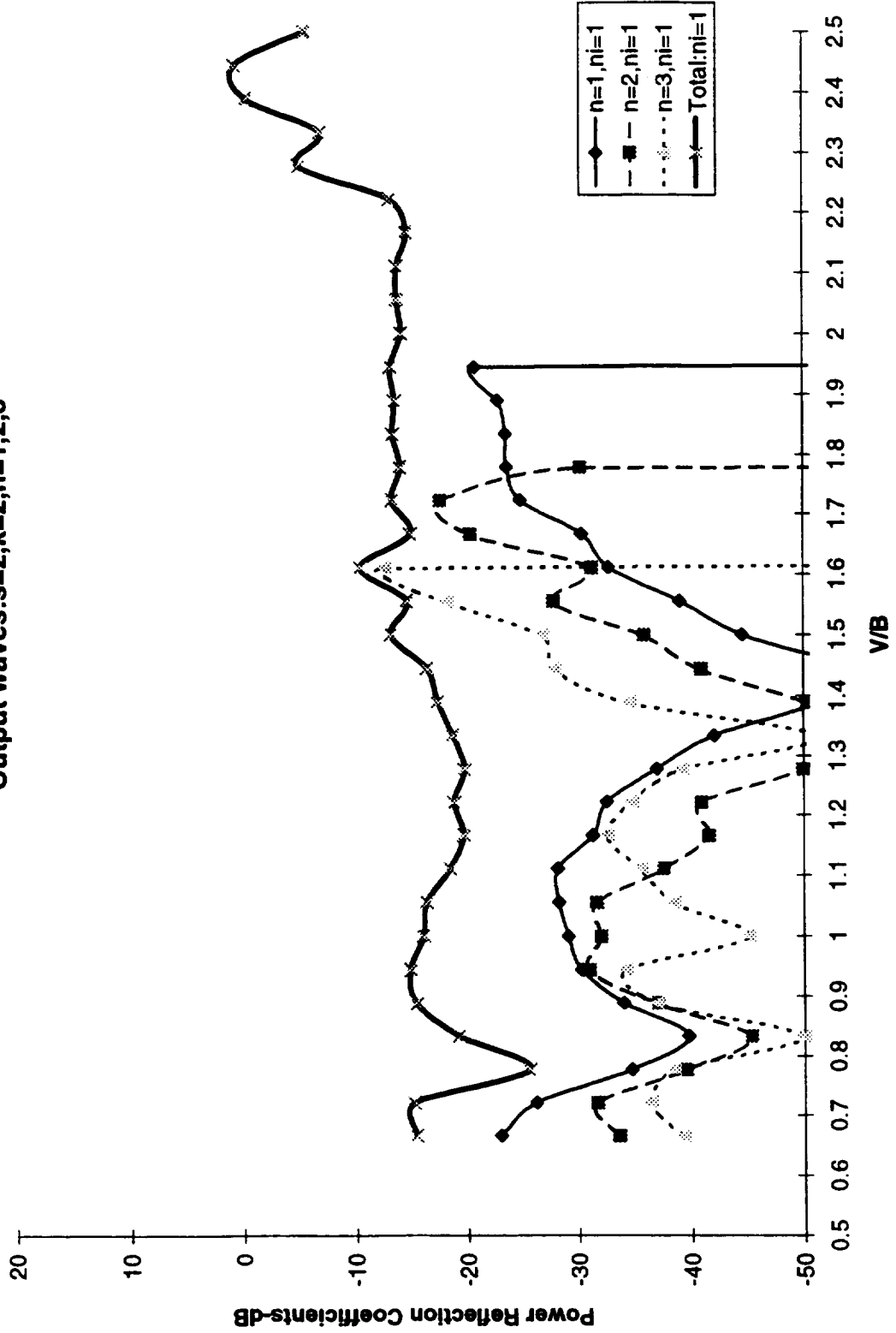
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $sl=3, ki=2, ni=1$

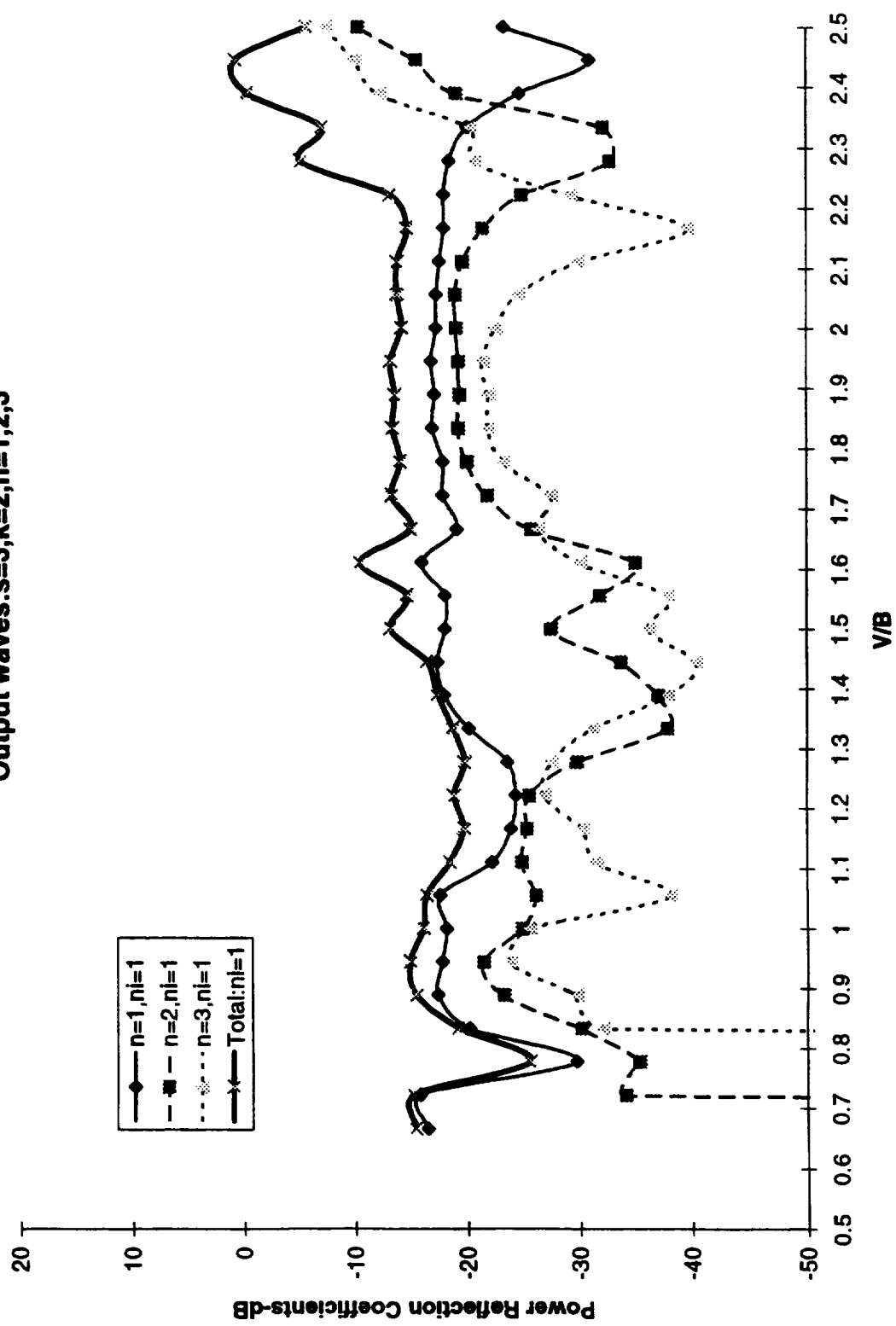
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=1$

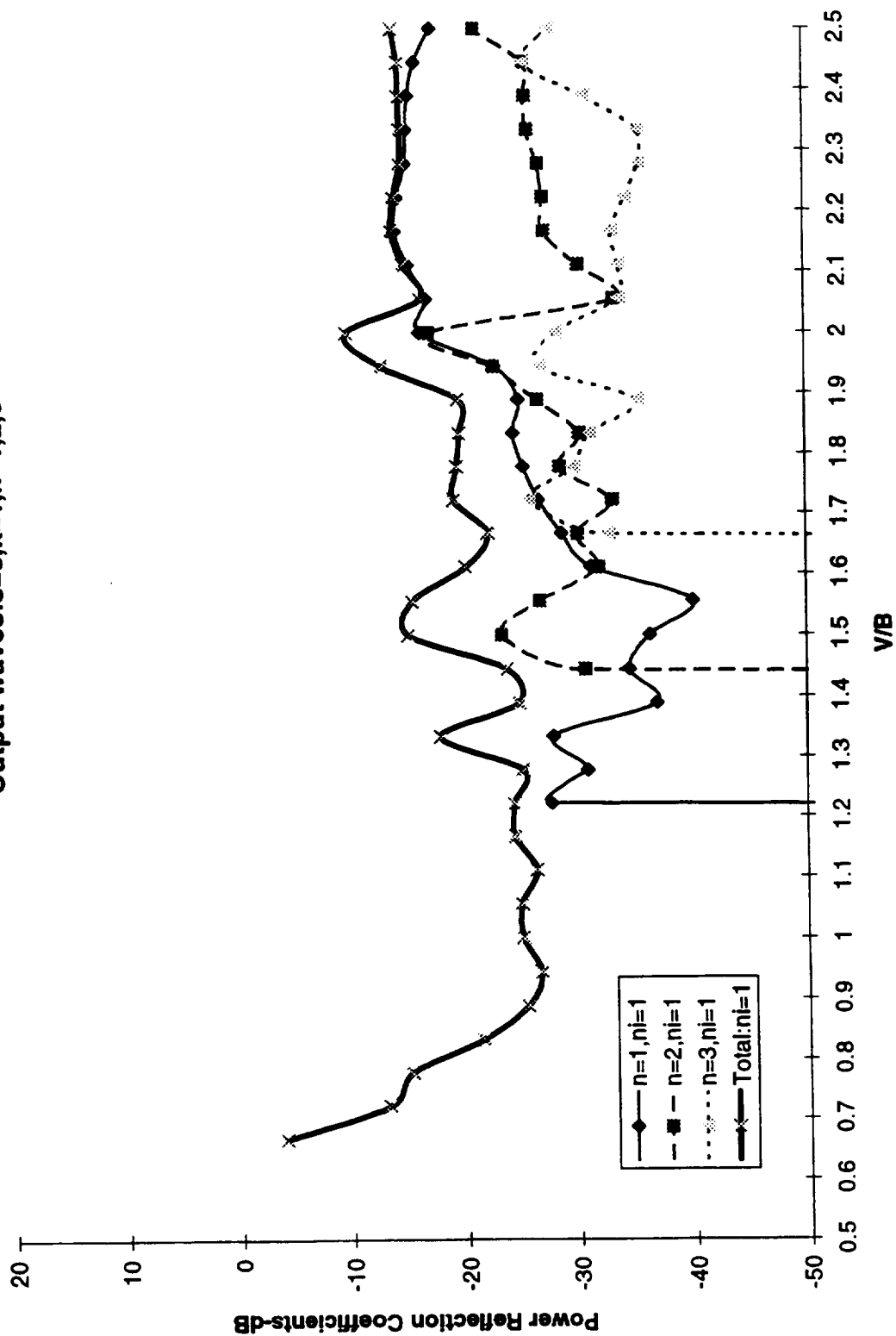
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=1$

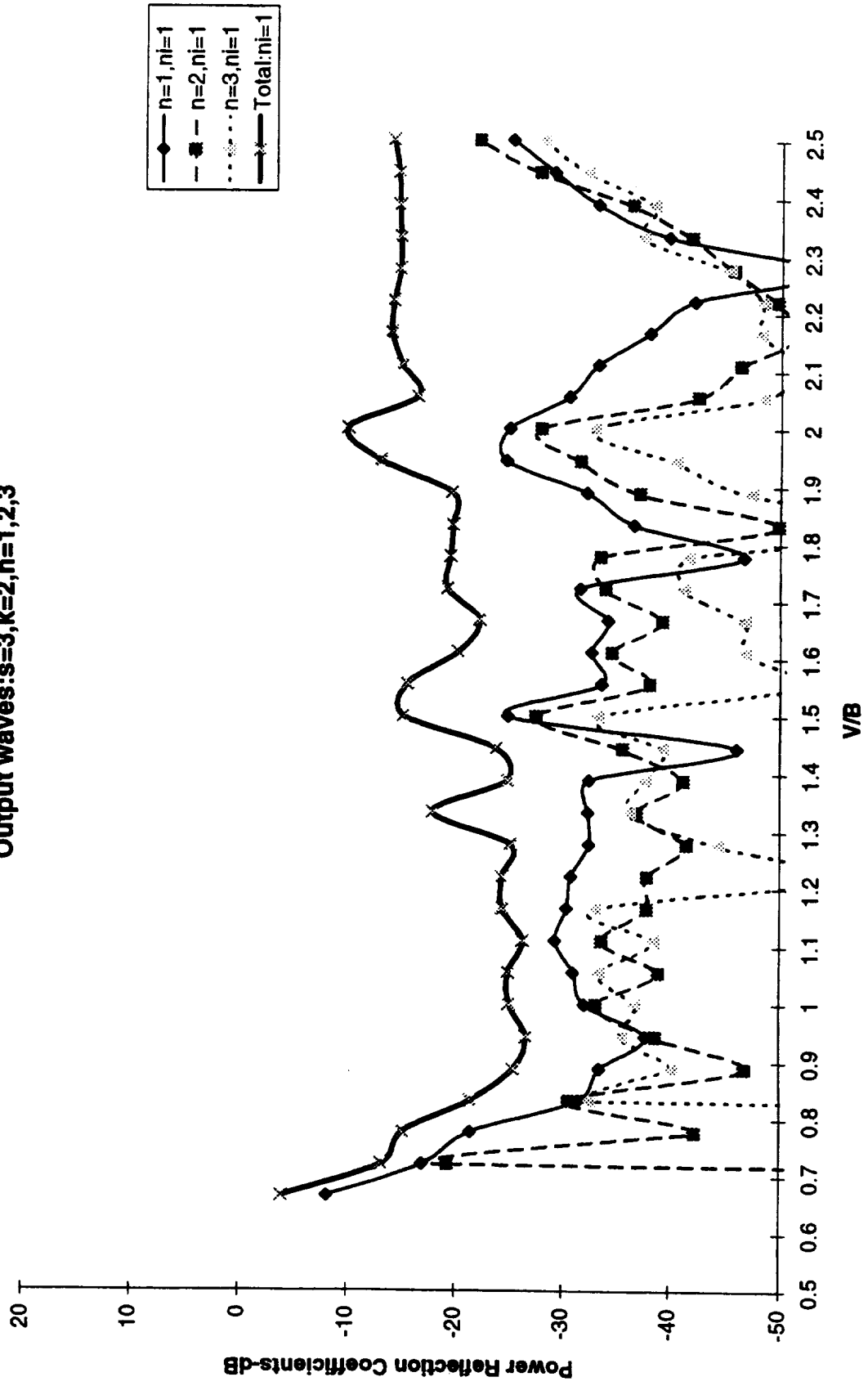
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_l=3, k_l=2, n_l=1$

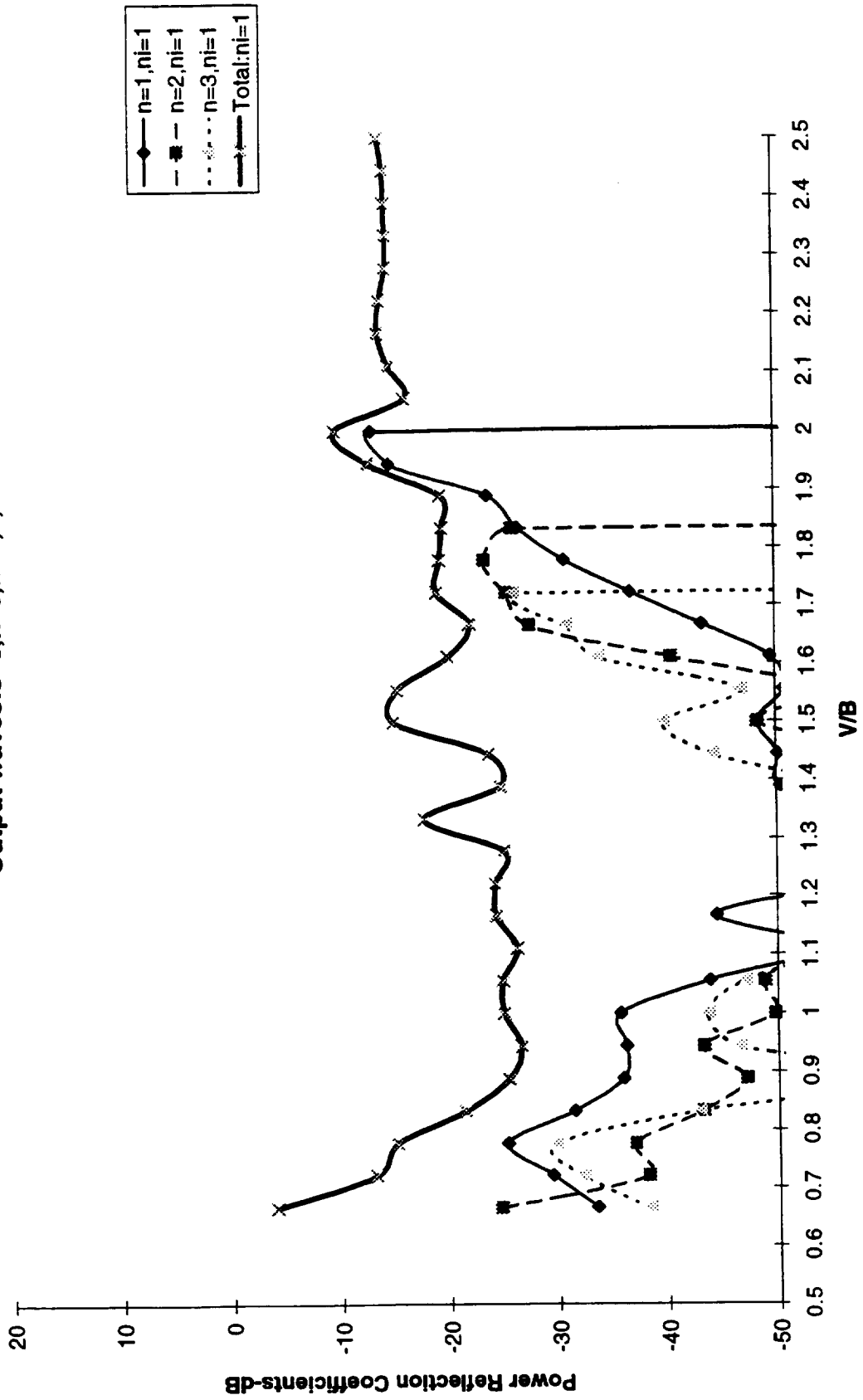
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=1$

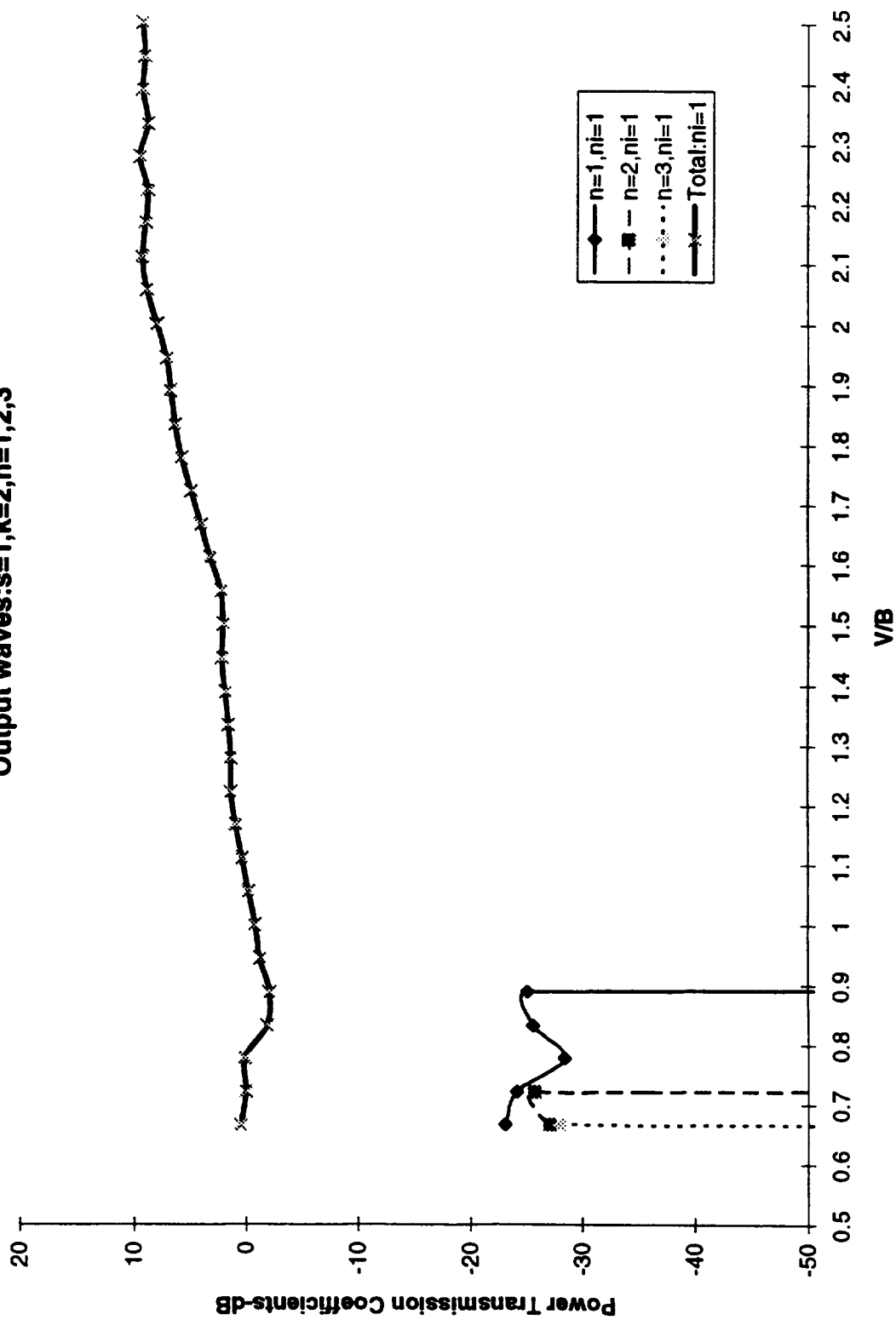
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=1$

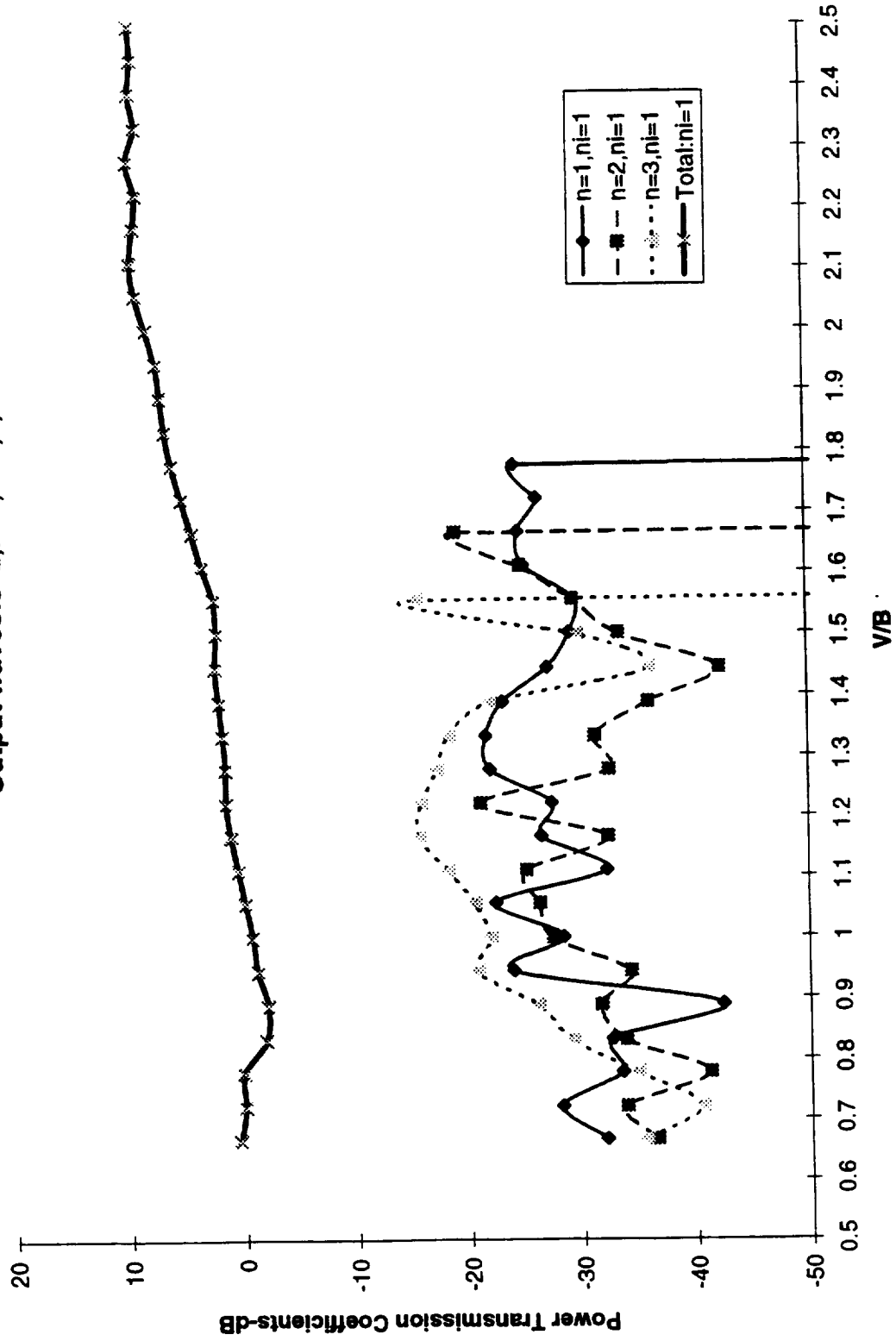
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_l=3, k_l=2, n_l=1$

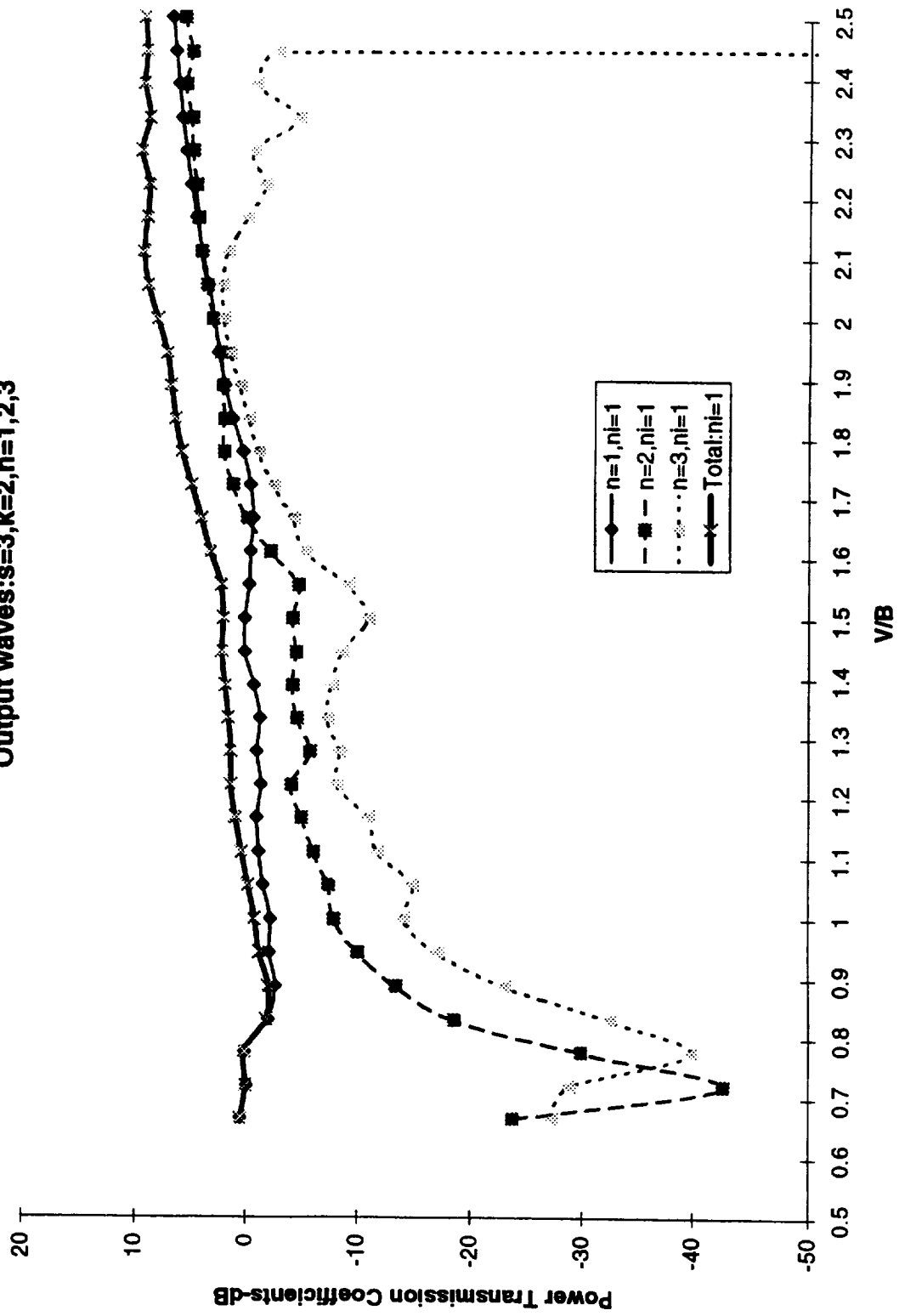
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=1$

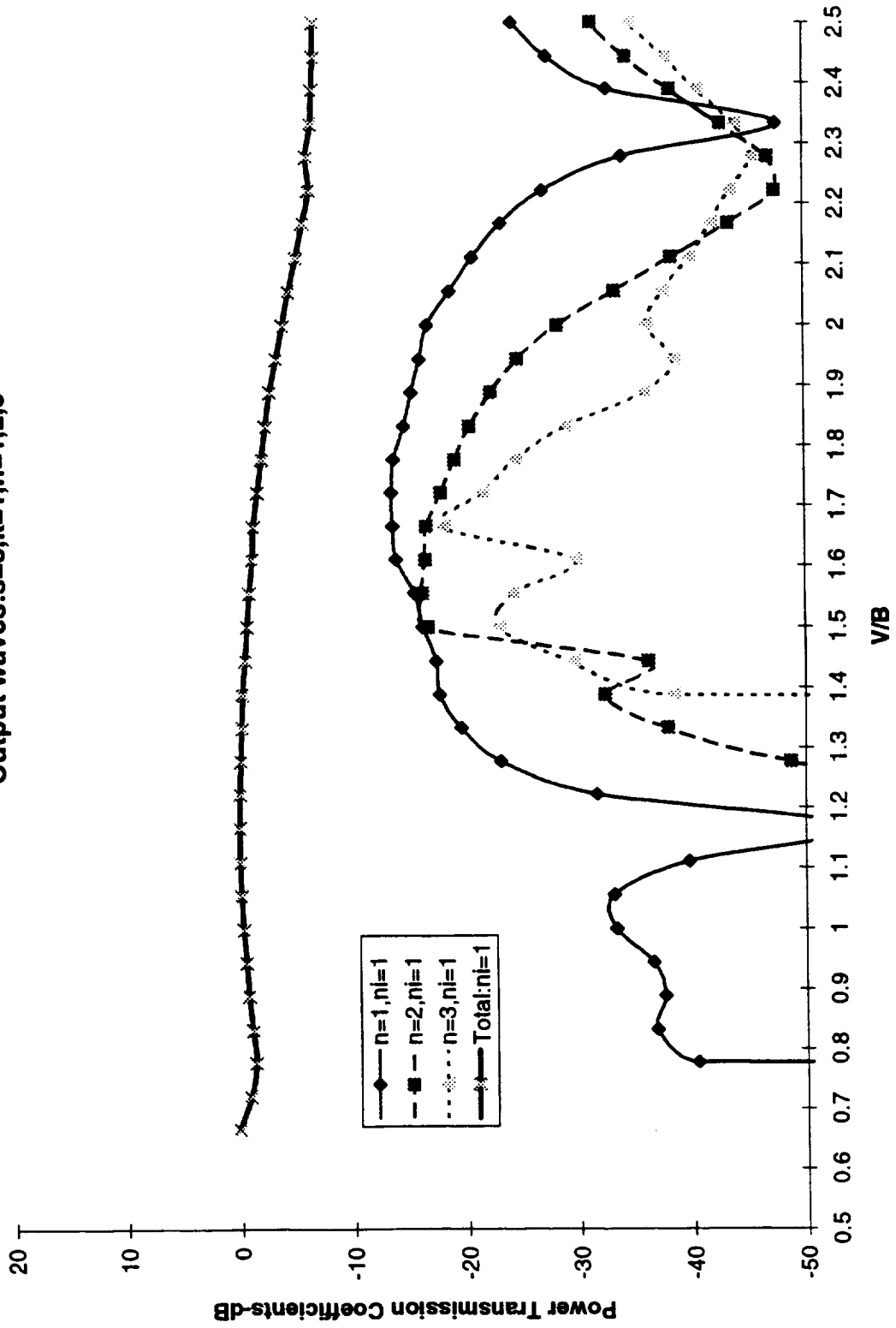
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_l=3, k_l=2, n_l=1$

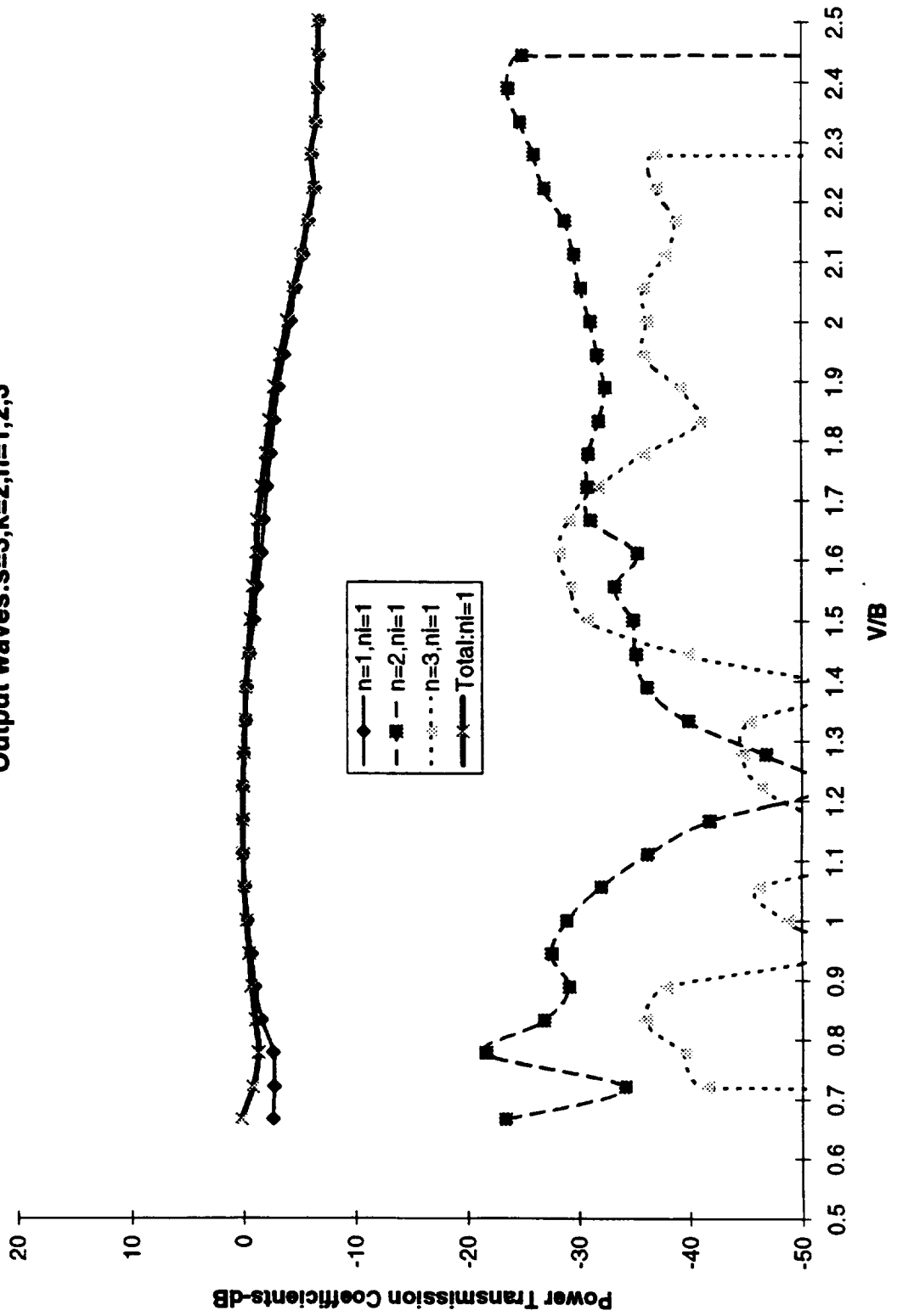
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_l=3, k_l=2, n_l=1$

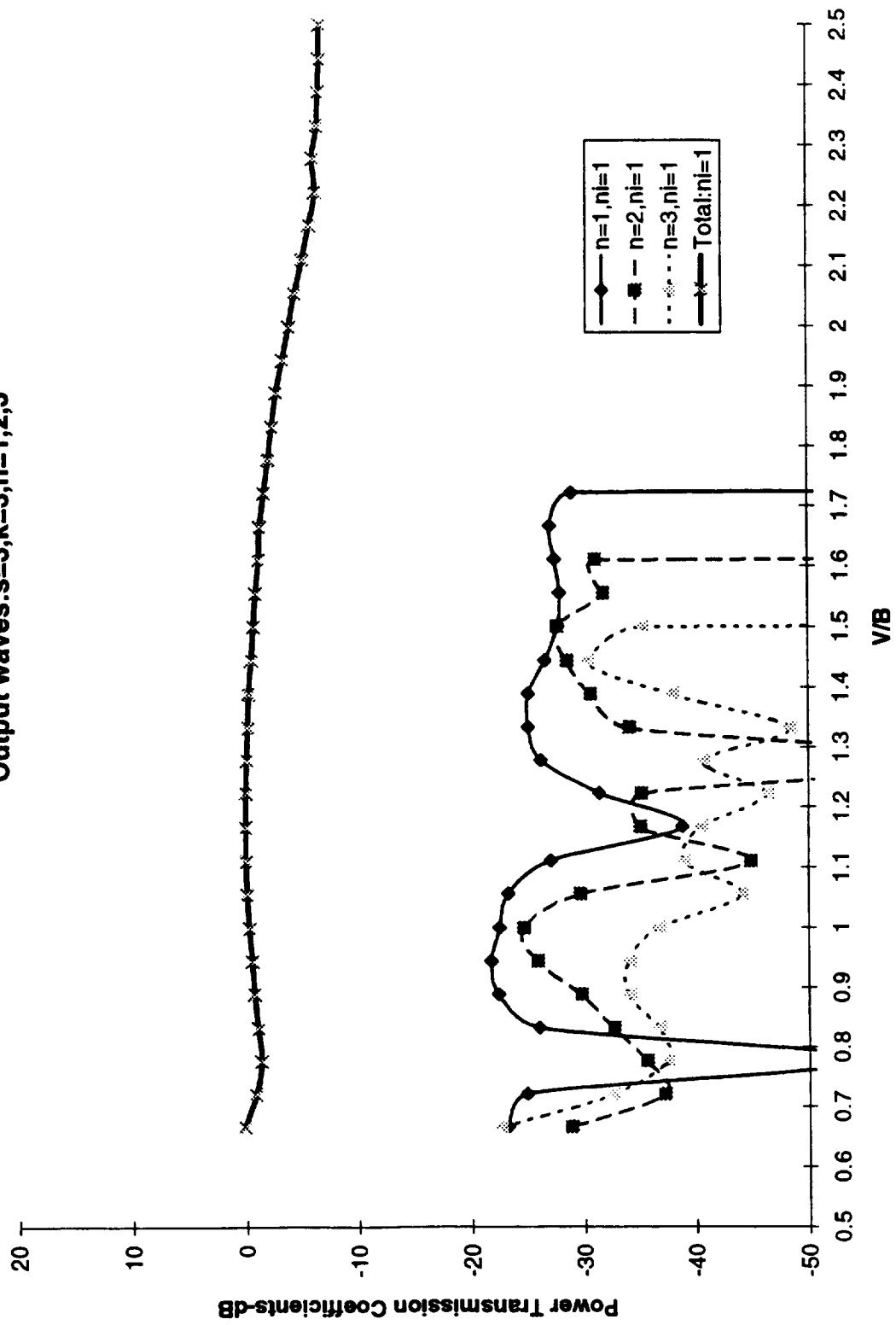
Output waves: $s=3, k=2, n=1, 2, 3$



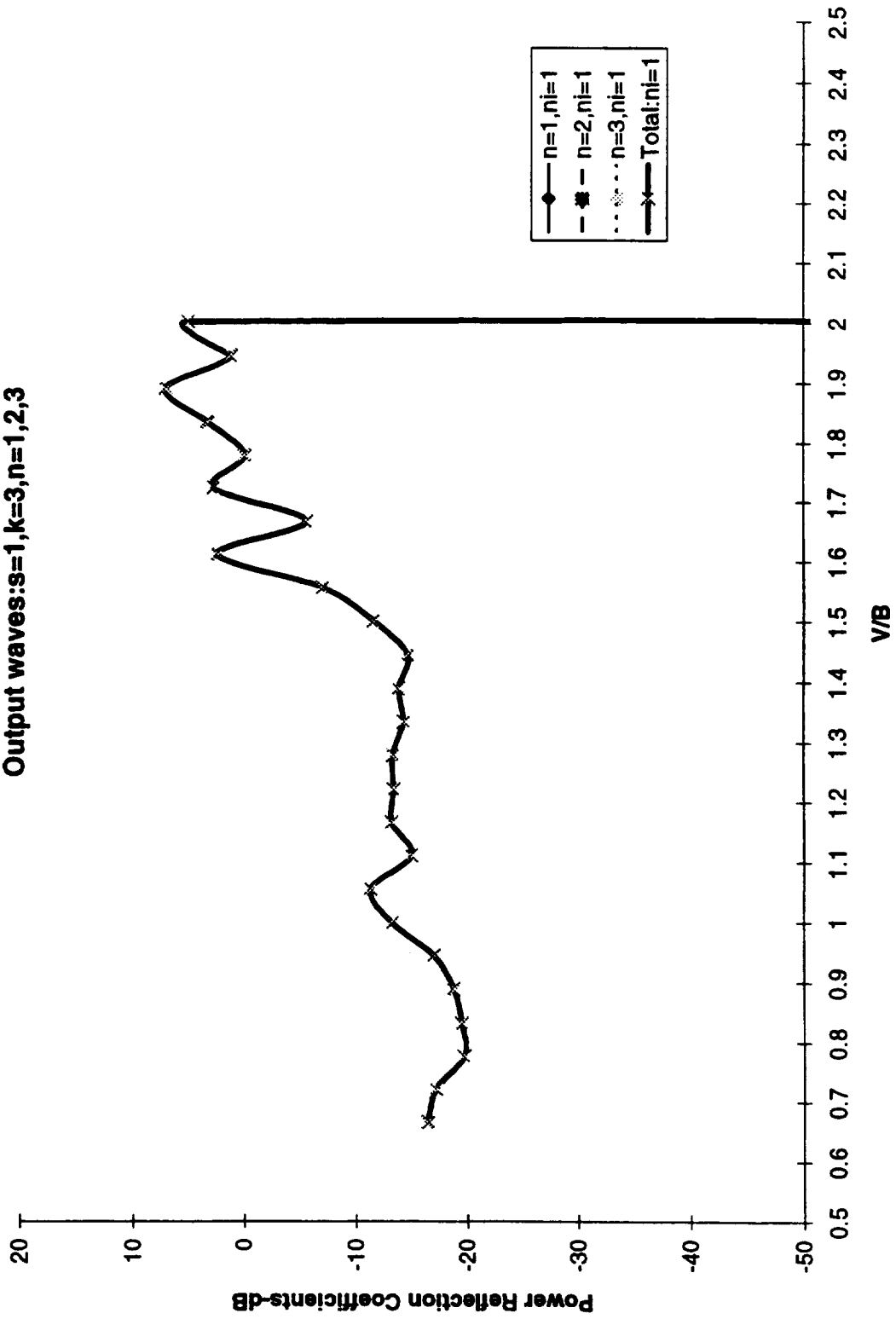
Stator Transmission-High Speed Case

Input wave: $sl=3, kl=2, ni=1$

Output waves: $s=3, k=3, n=1, 2, 3$



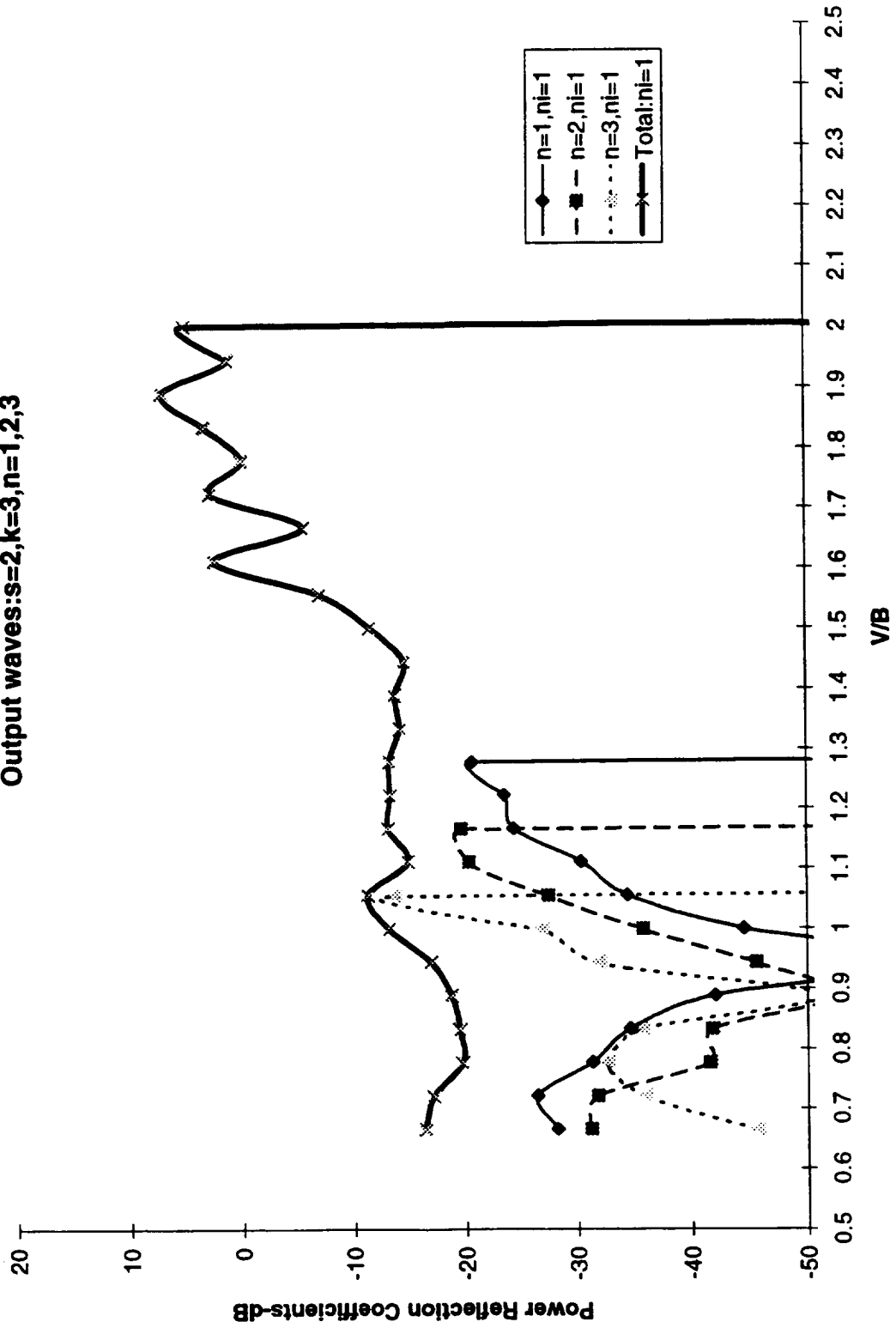
Rotor Reflection-High Speed Case
Input wave: $s_i=3, k_i=3, n_i=1$
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_l=3, k_l=3, n_l=1$

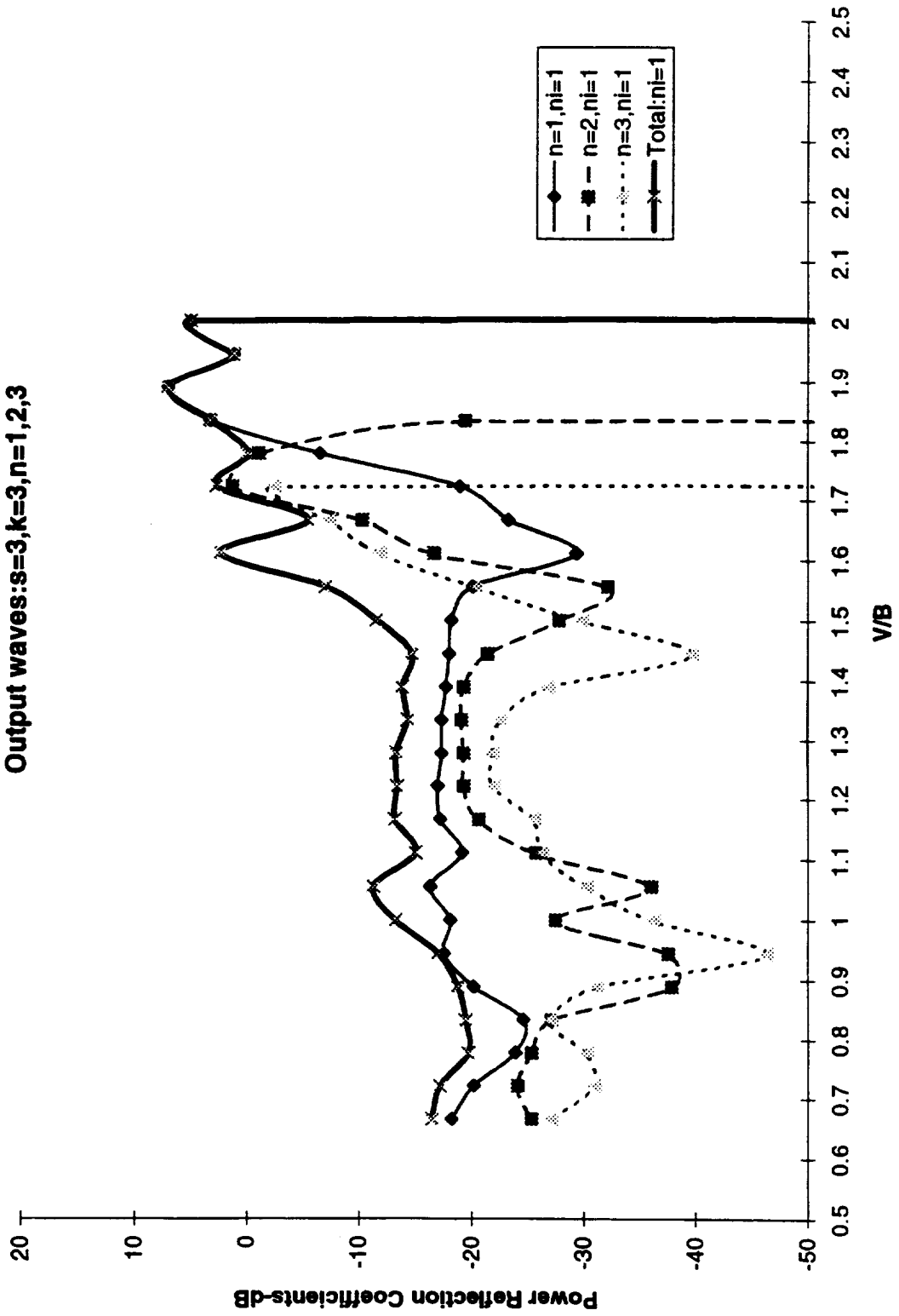
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_l=3, k_l=3, n_l=1$

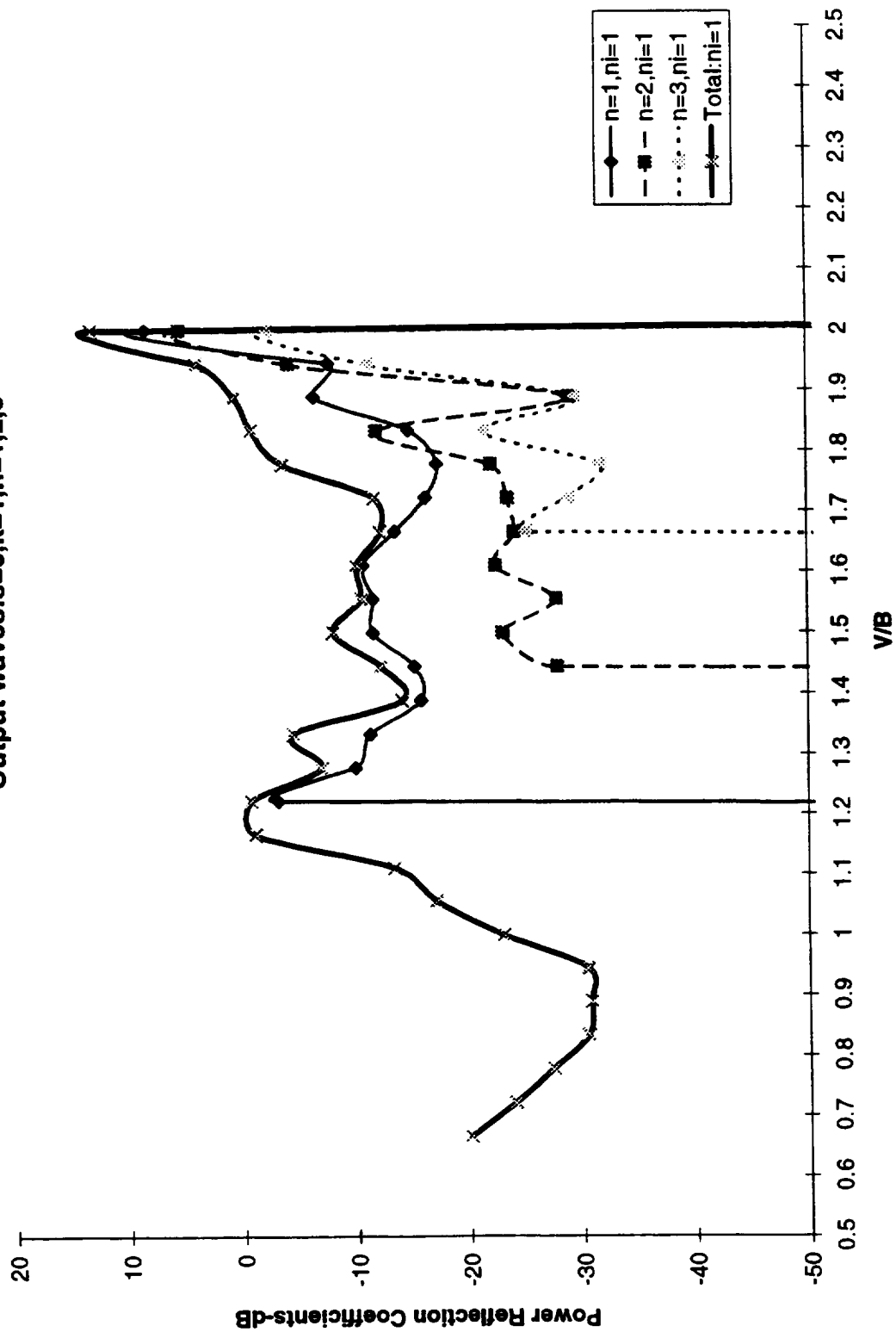
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $sl=3, kl=3, ni=1$

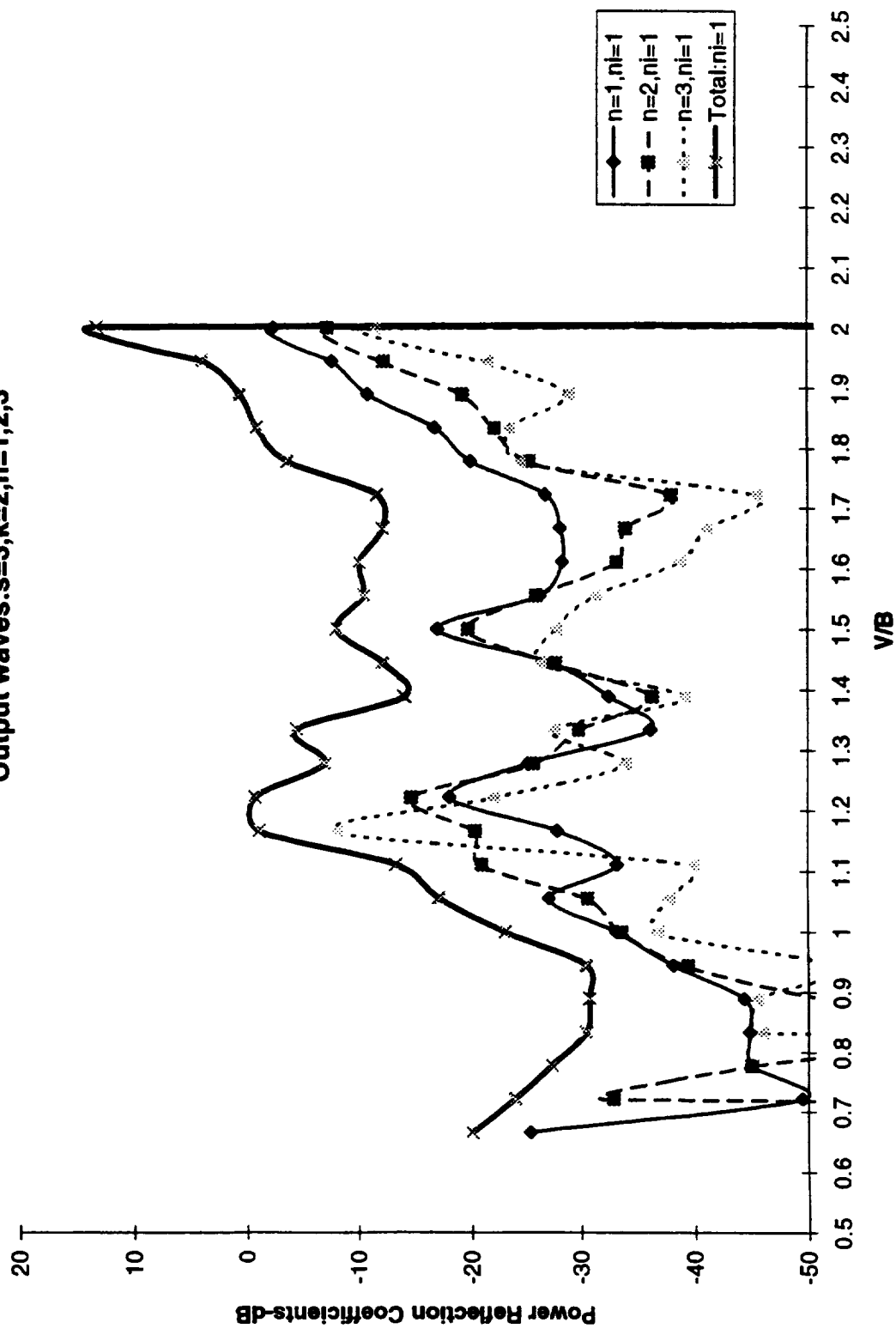
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=1$

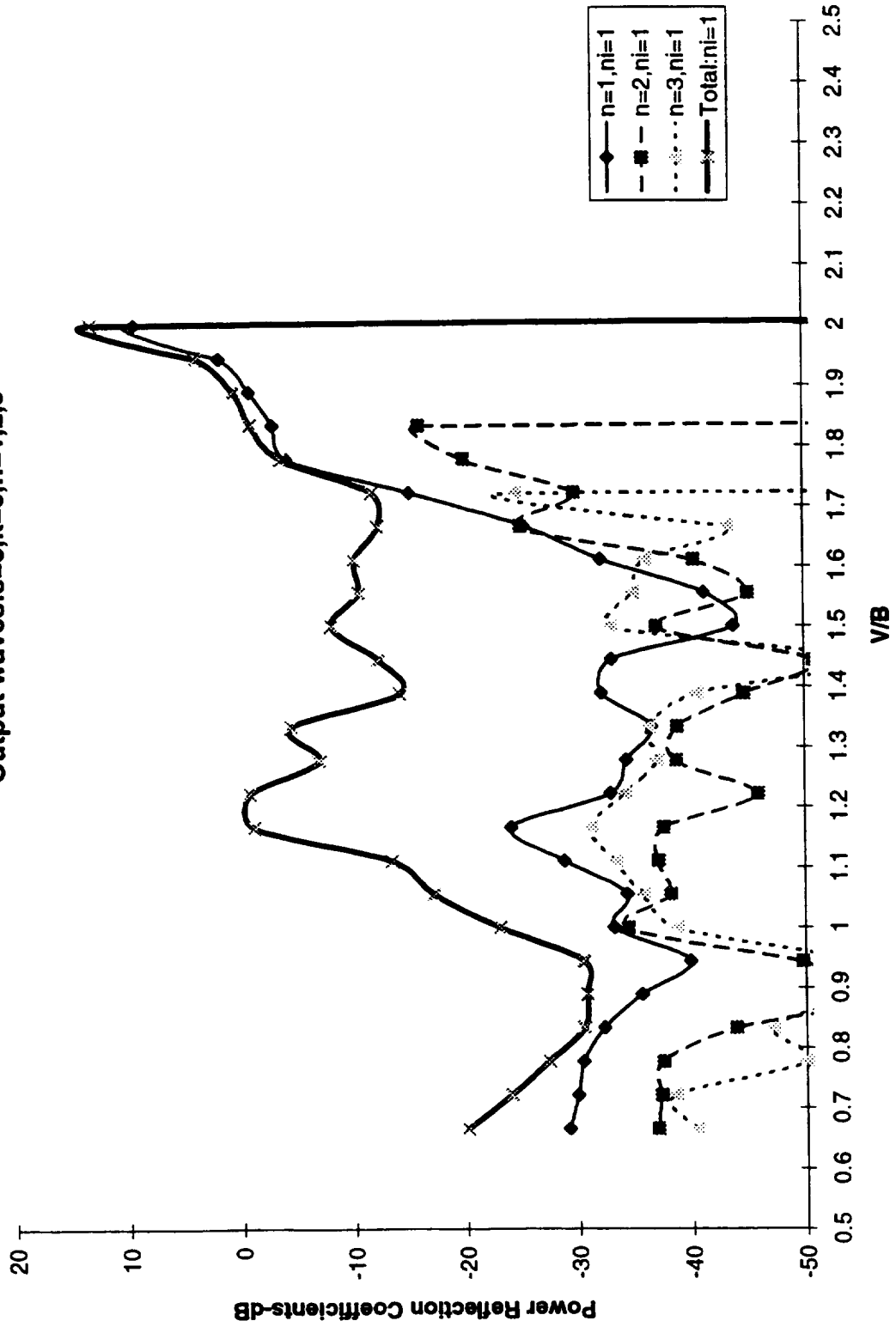
Output wave: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $sl=3, ki=3, ni=1$

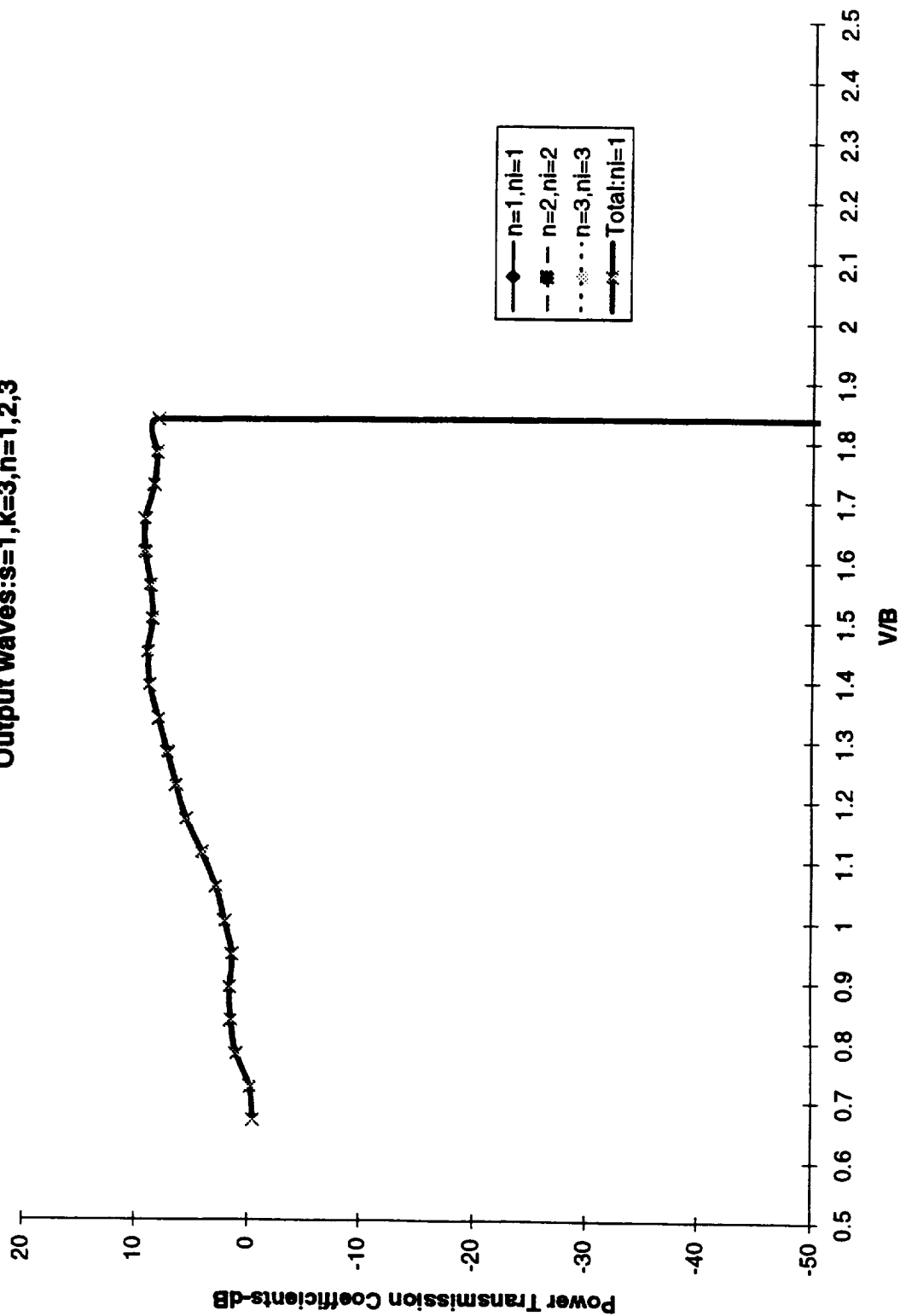
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $sl=3, kl=3, nl=1$

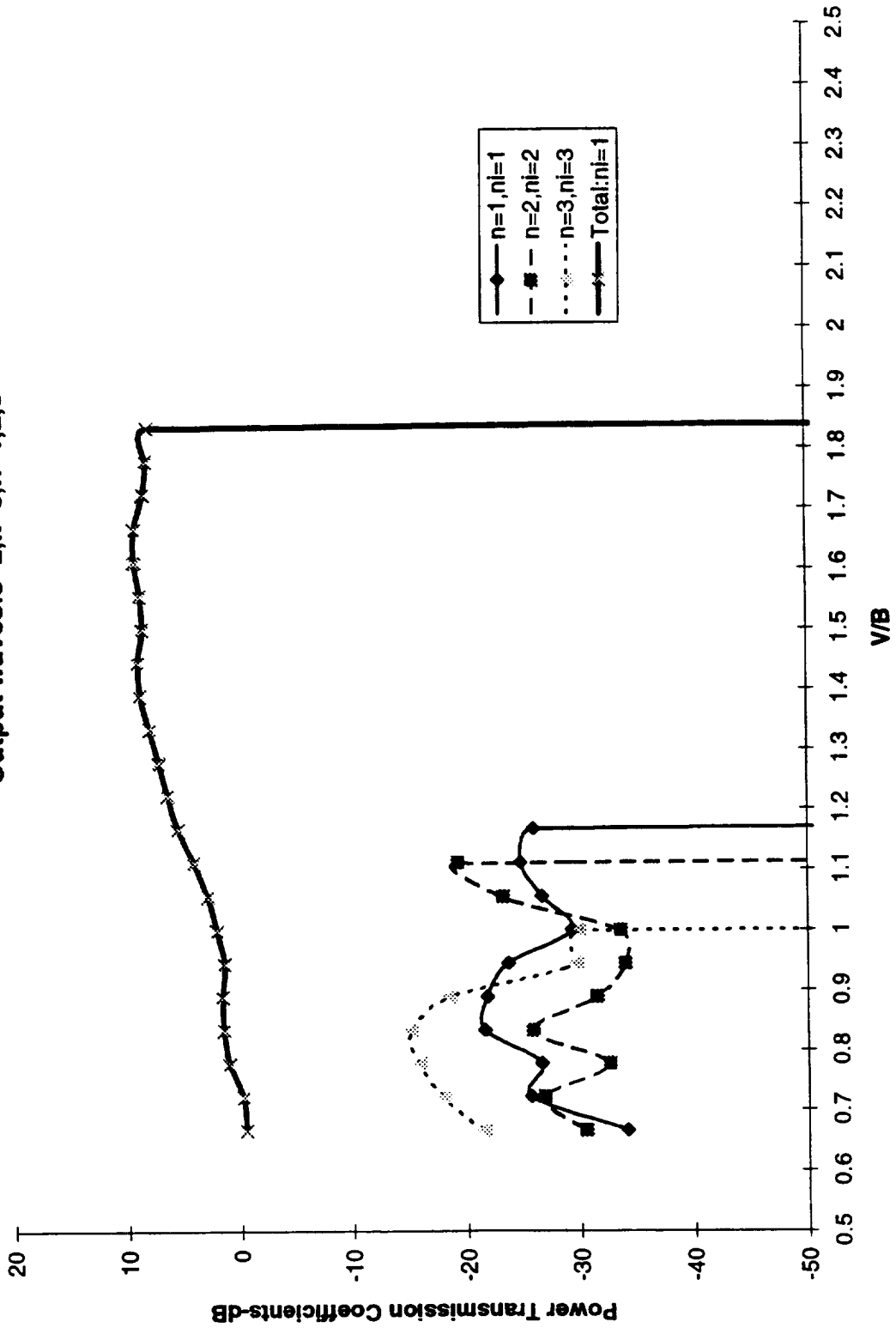
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=1$

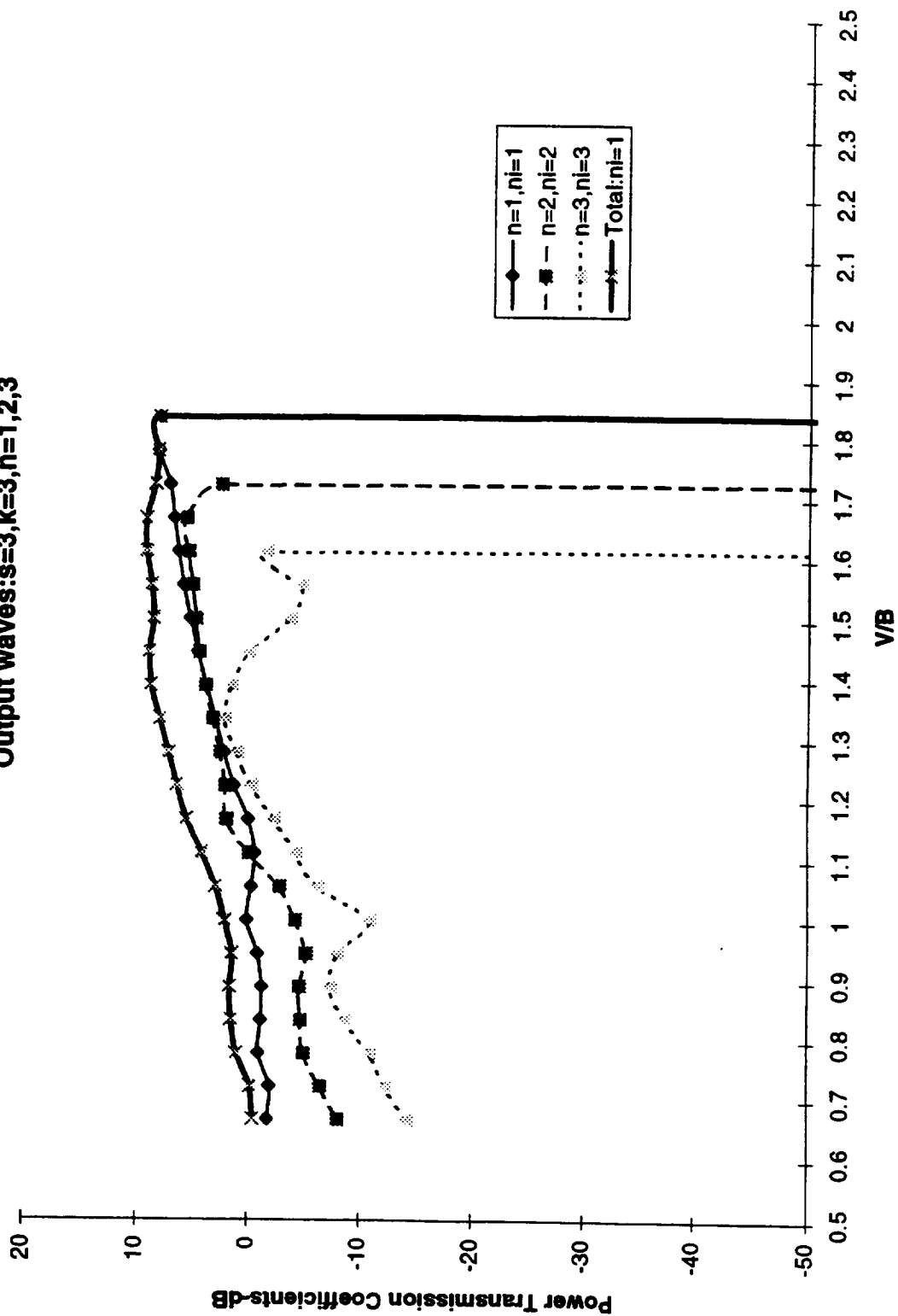
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_l=3, k_l=3, n_l=1$

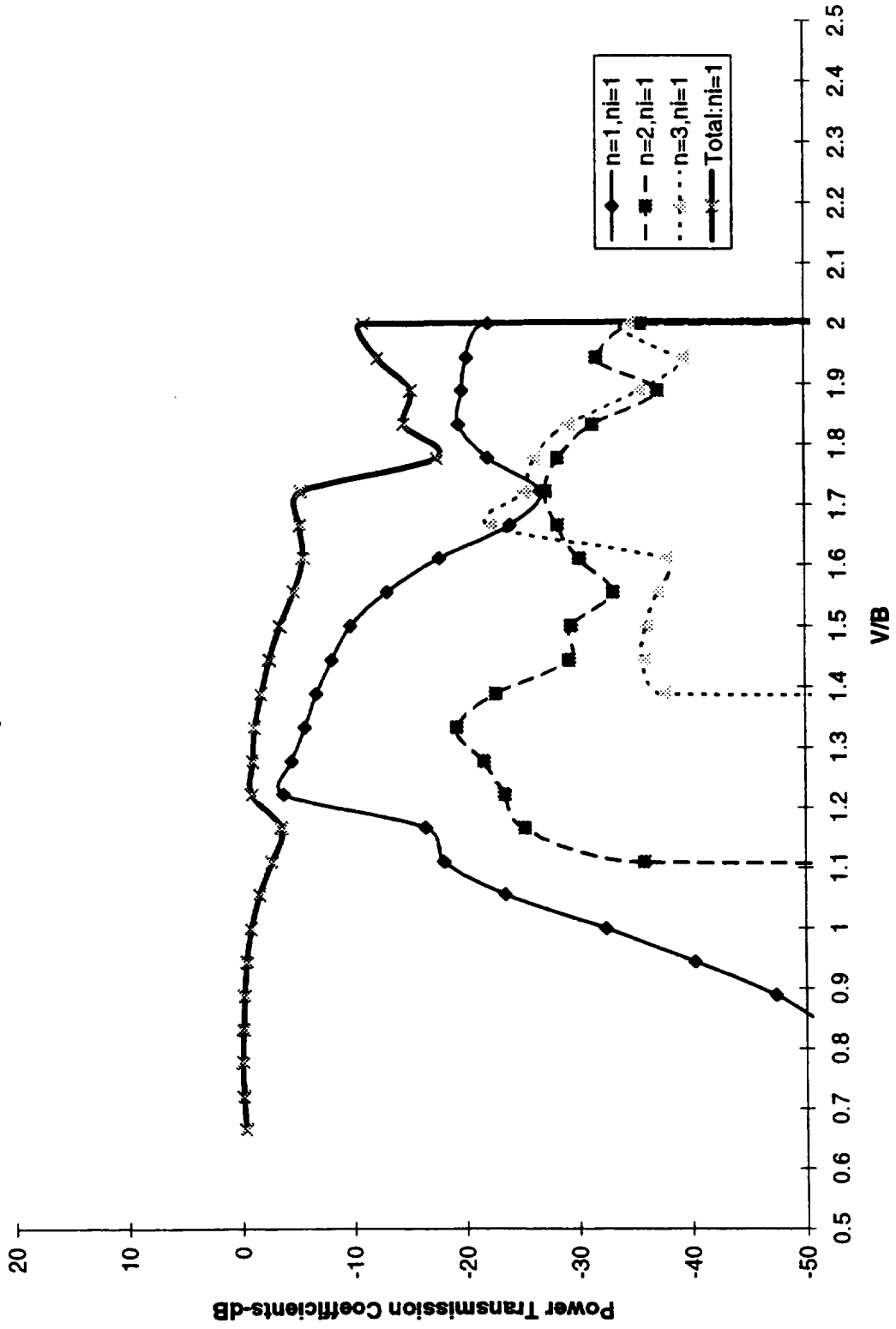
Output wave: $s=3, k=3, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=1$

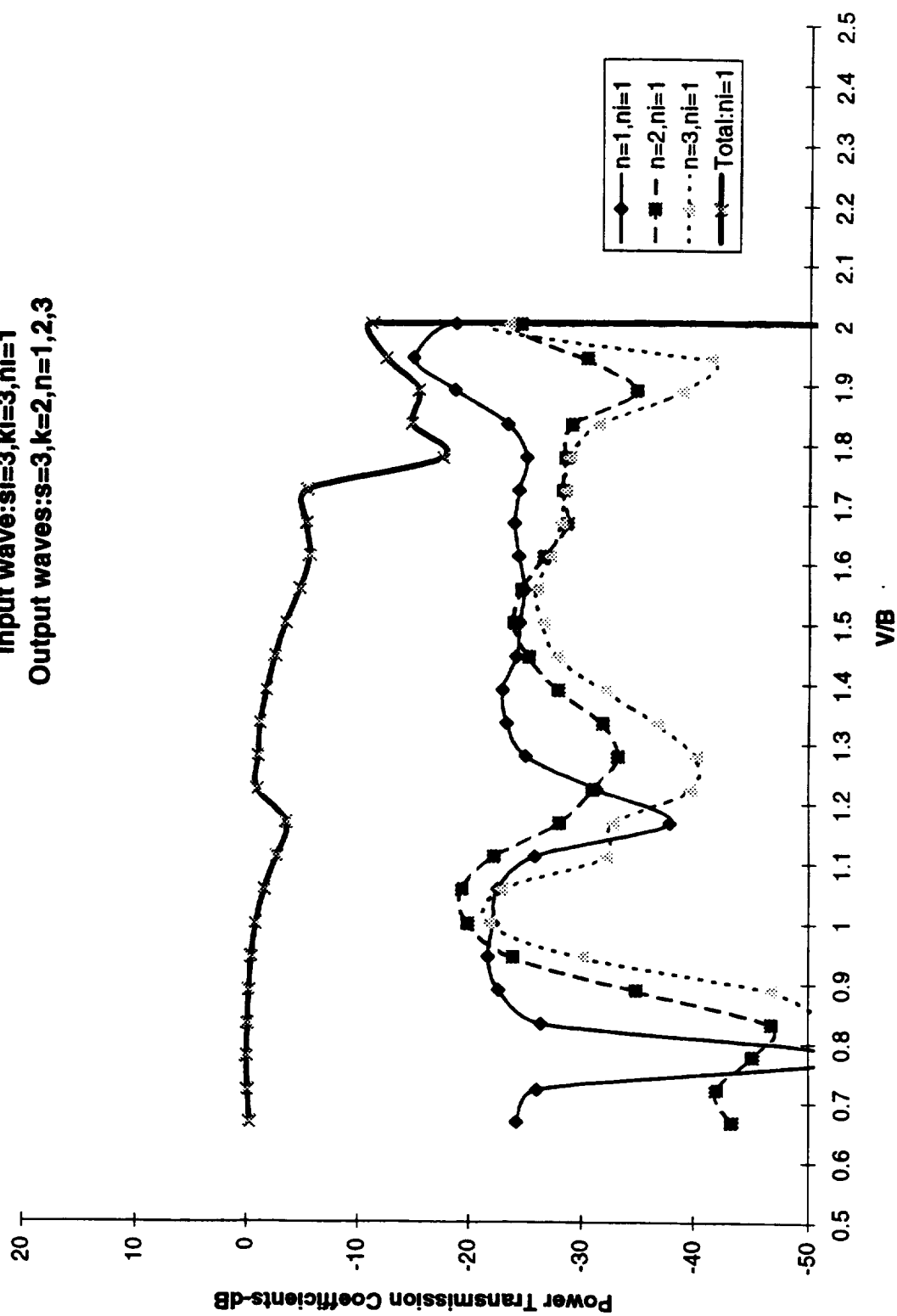
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_l=3, k_l=3, n_l=1$

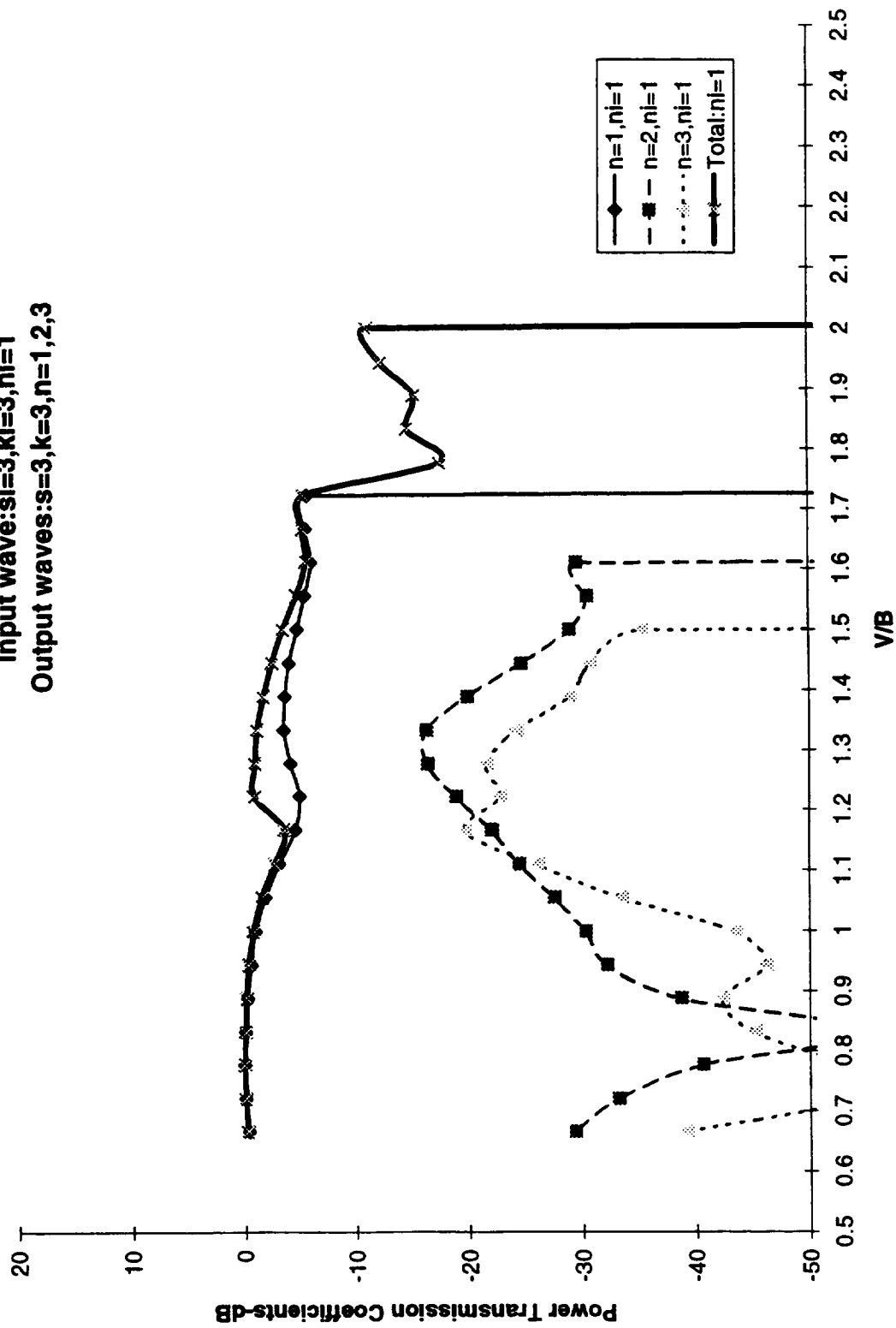
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=1$

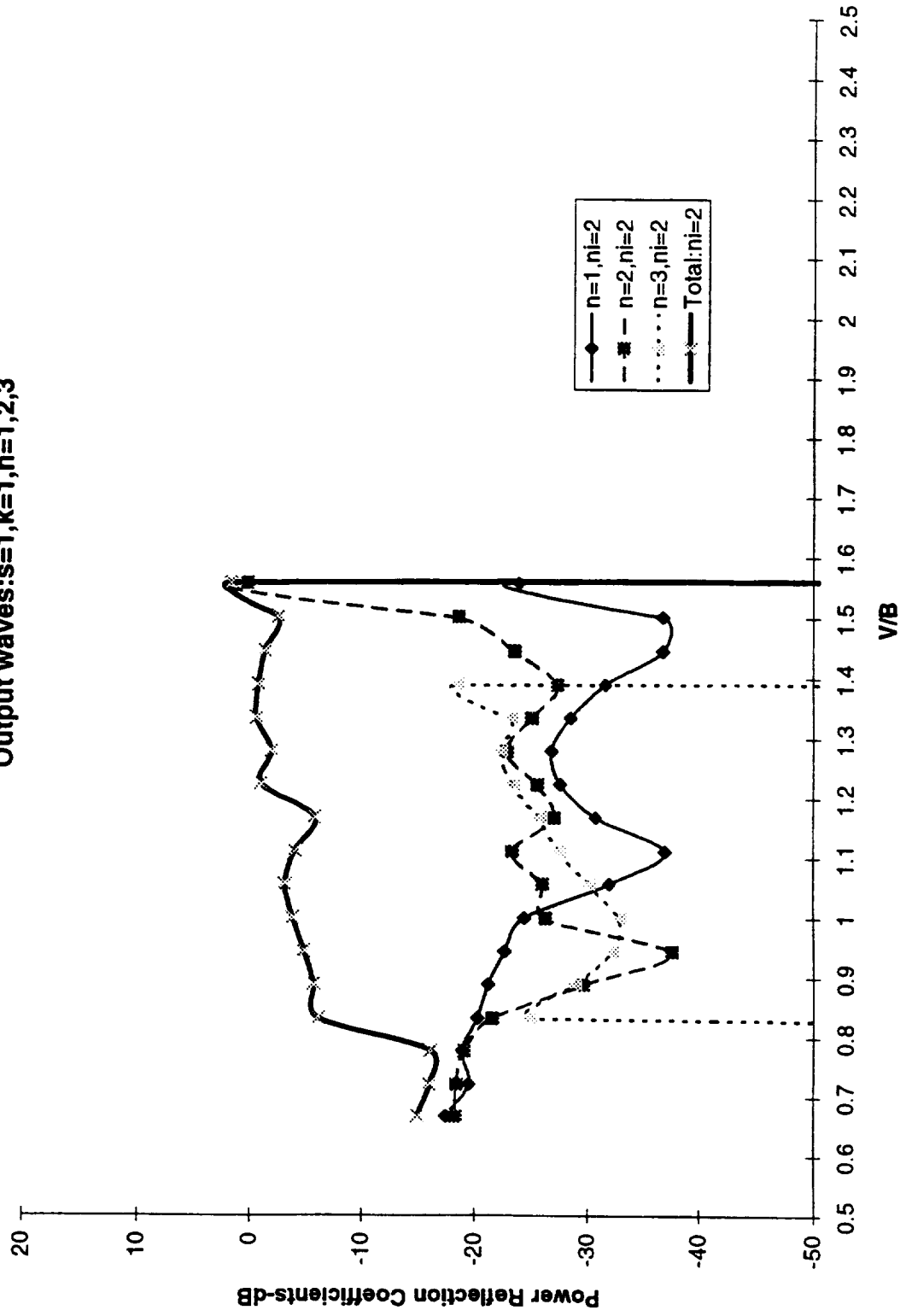
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

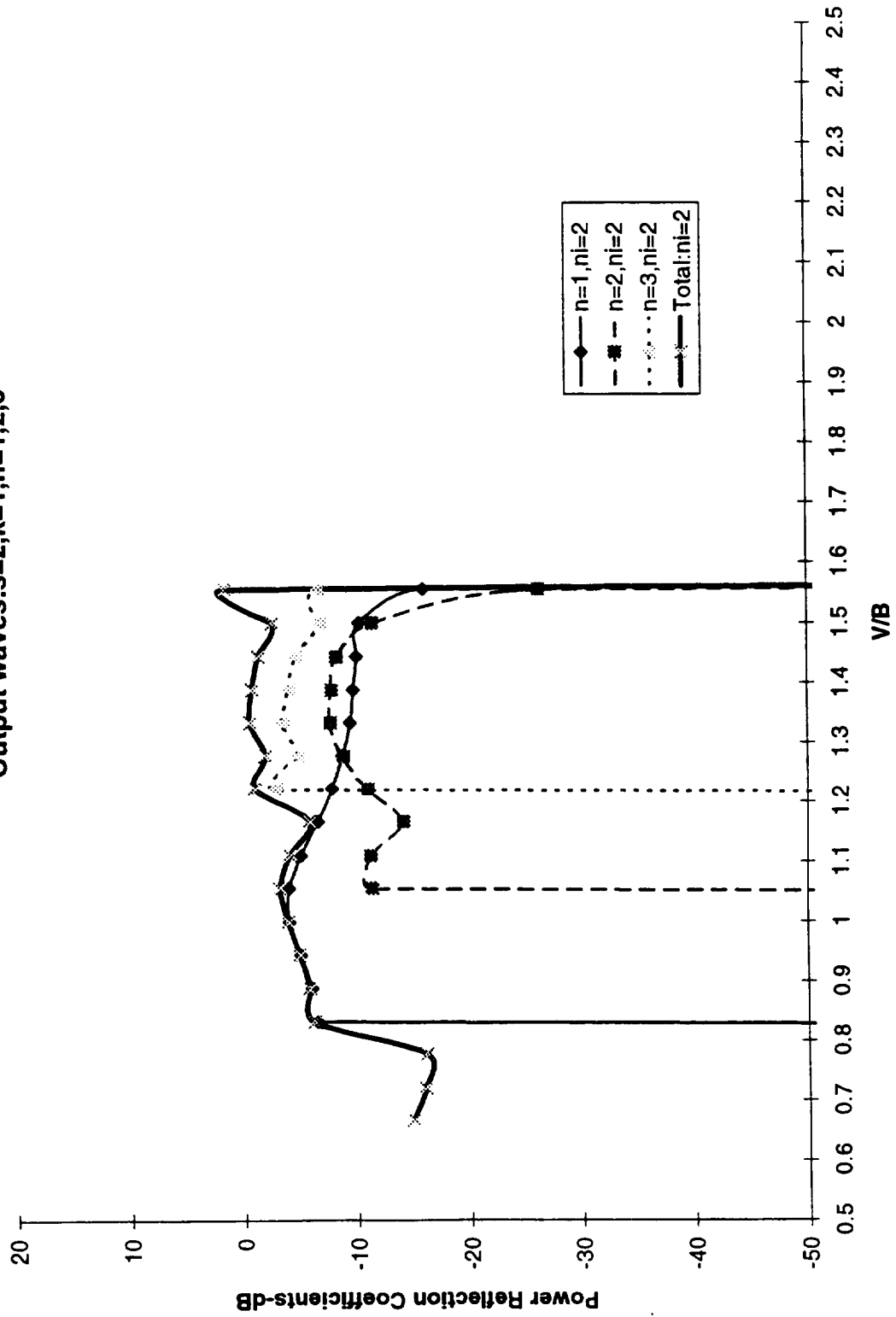
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

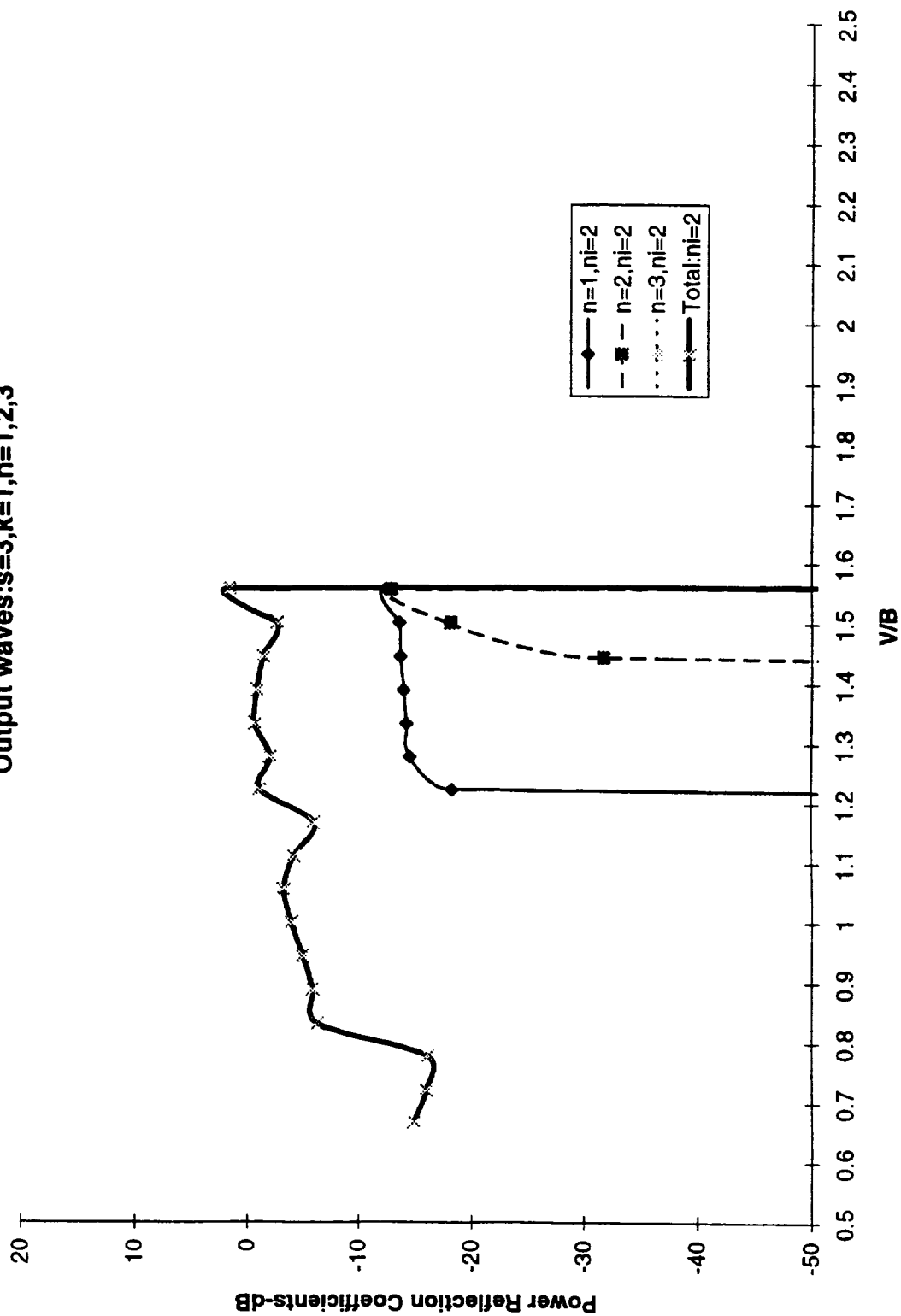
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

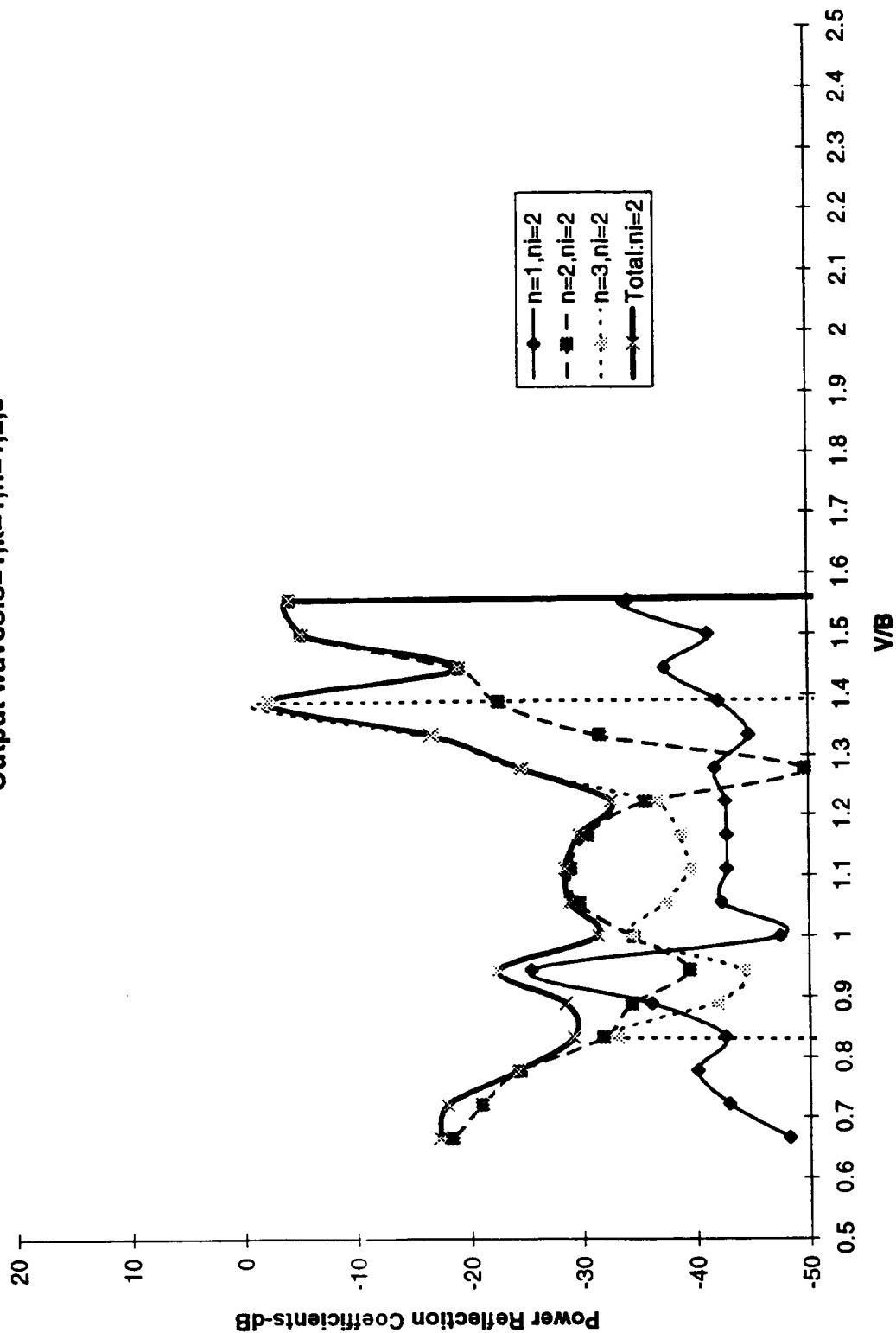
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_l=1, k_l=1, n_l=2$

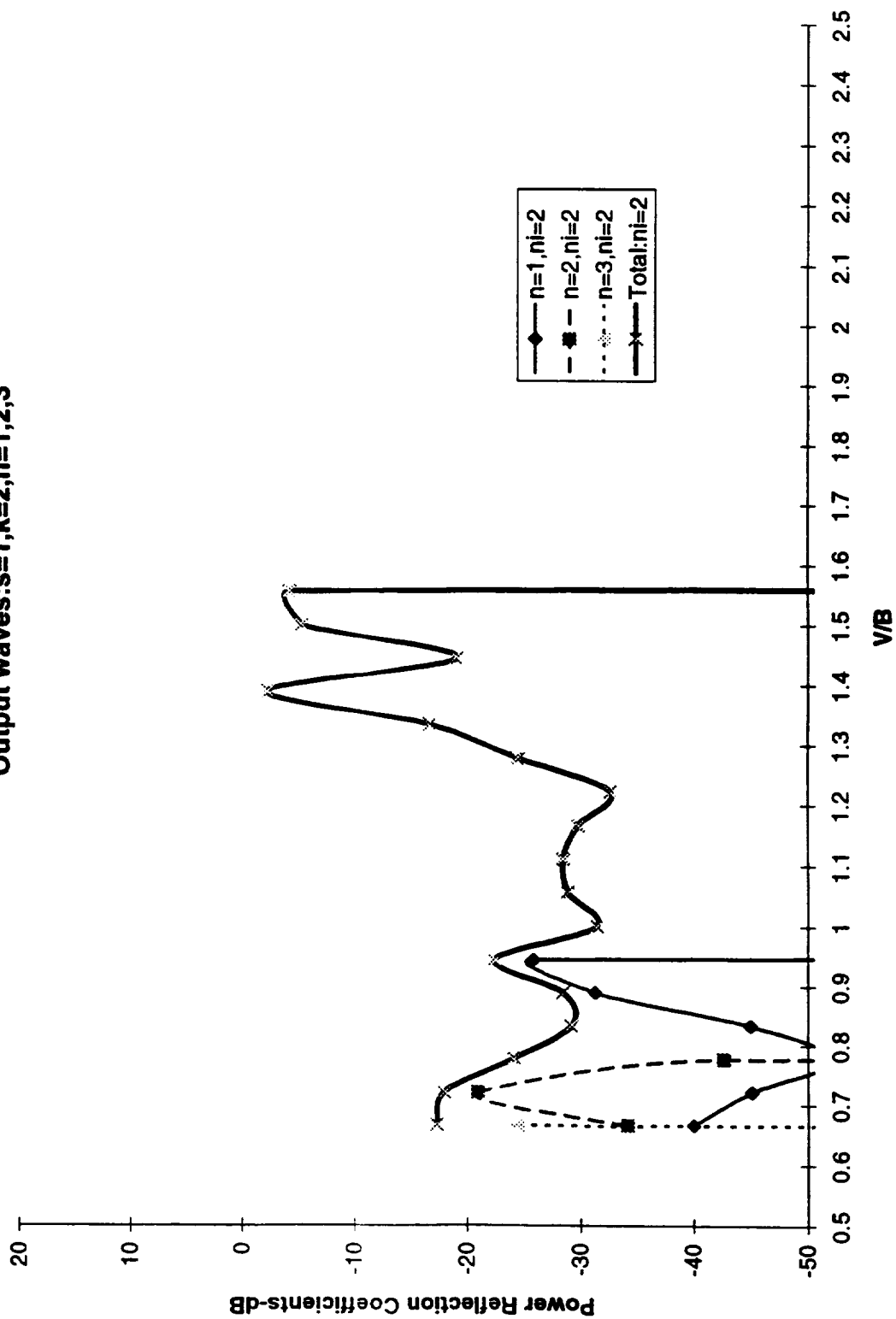
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

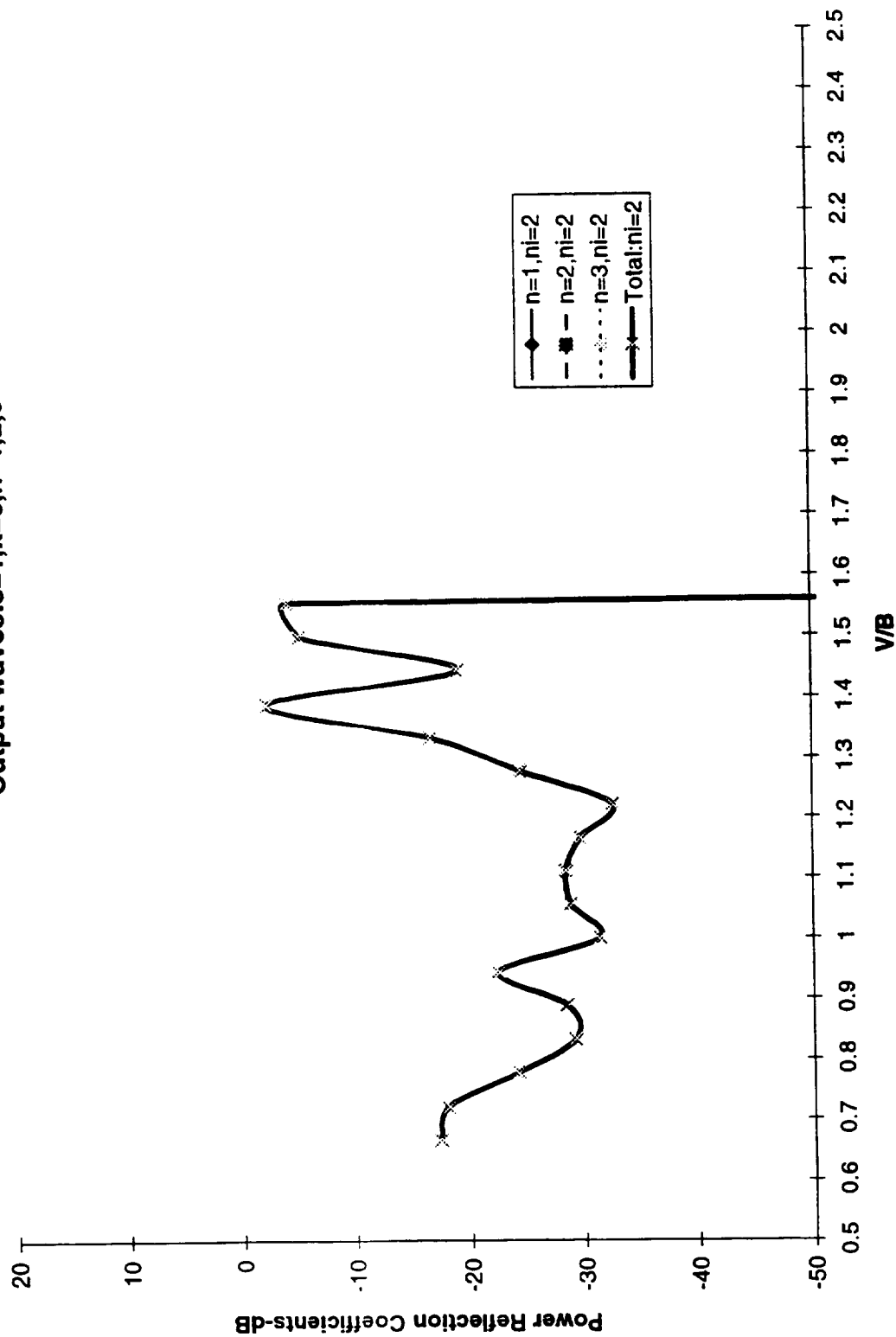
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

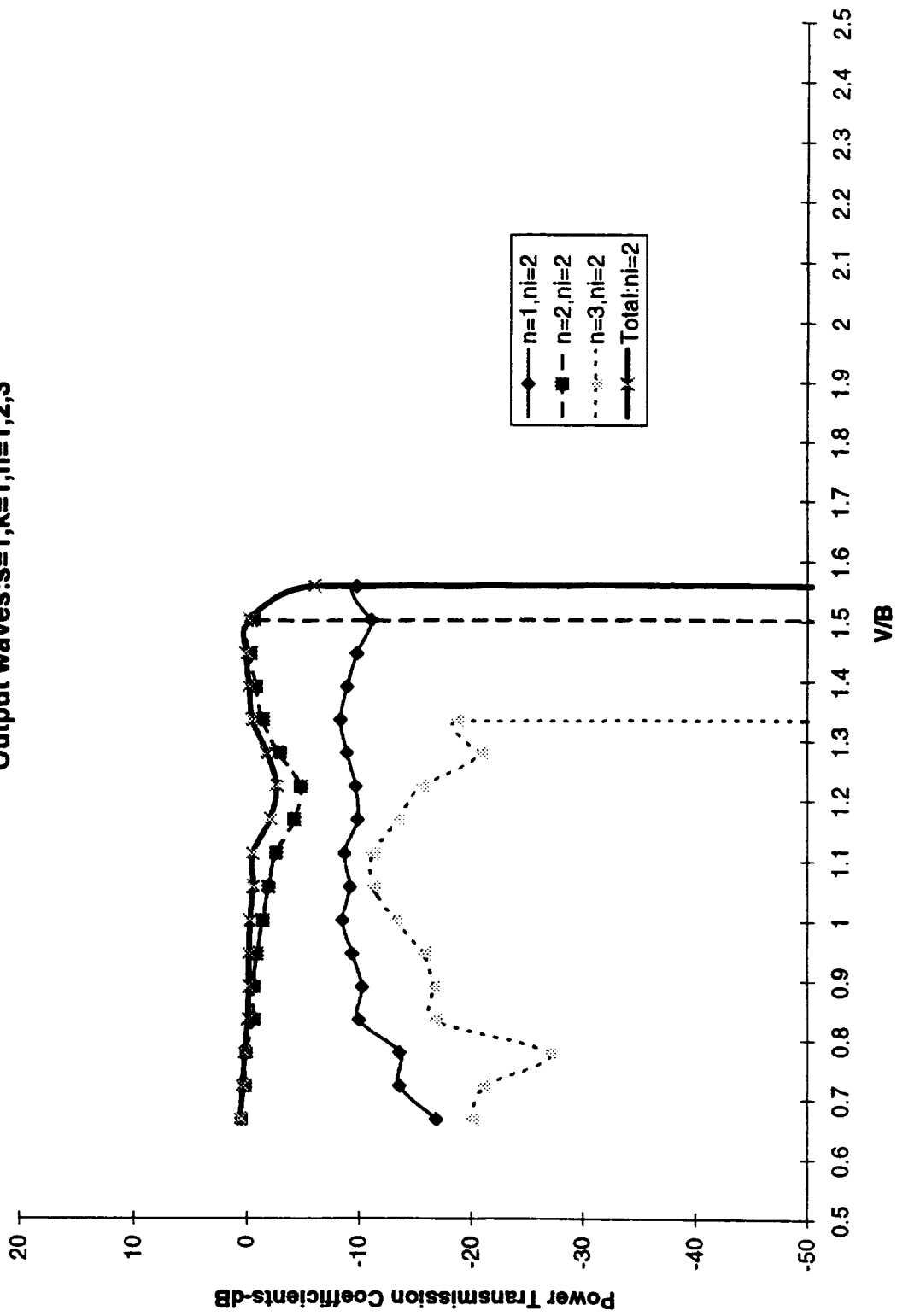
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

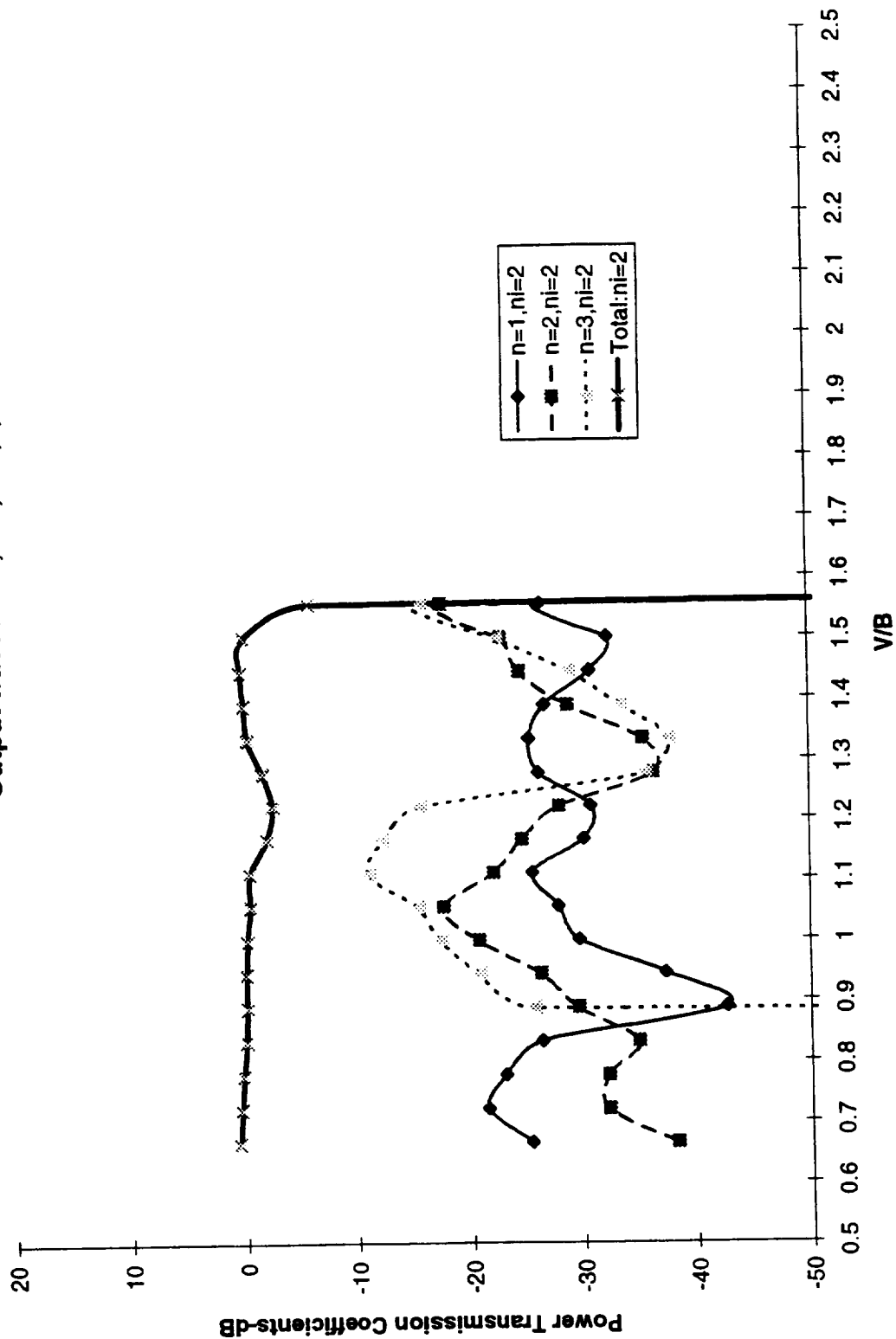
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

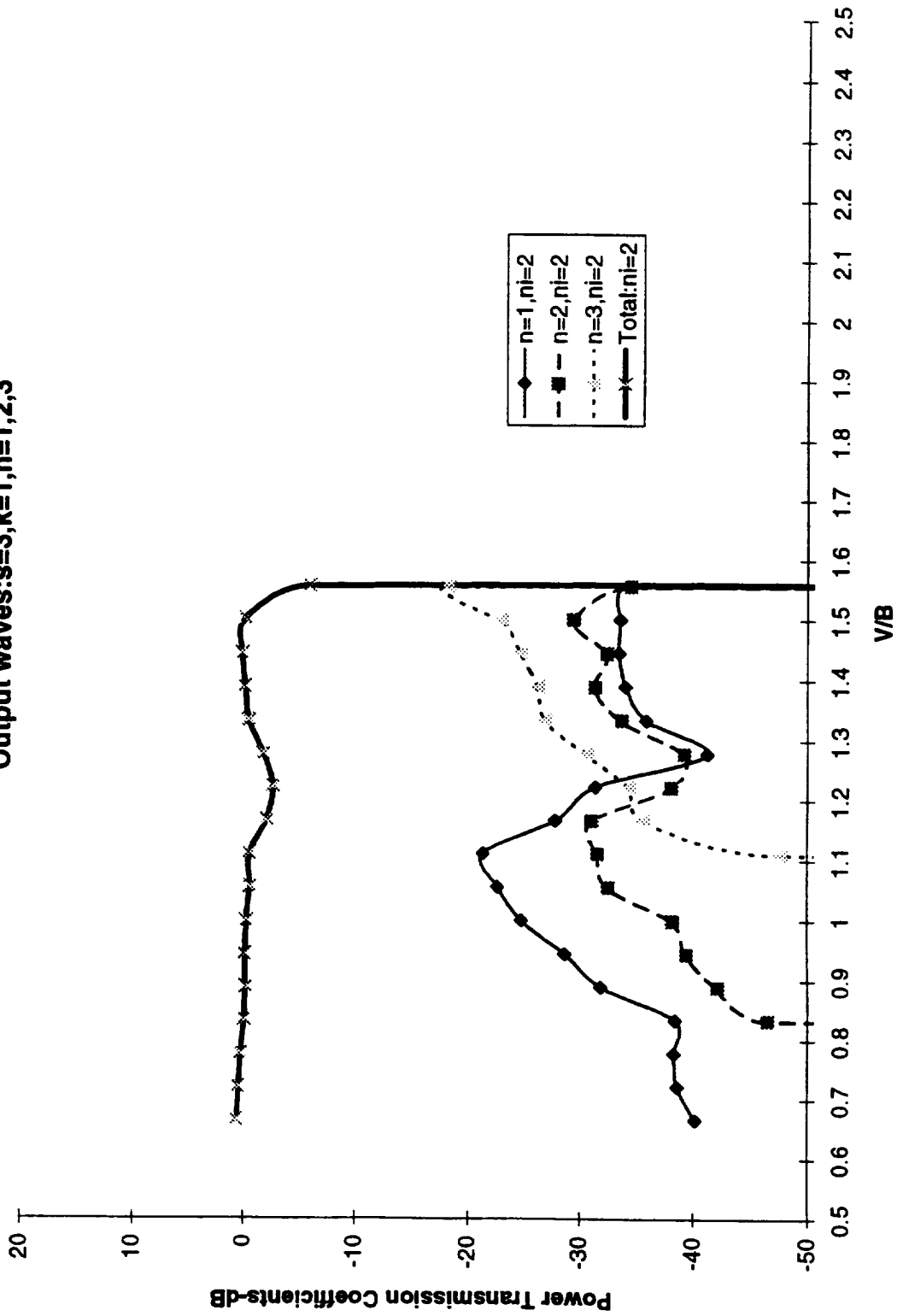
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

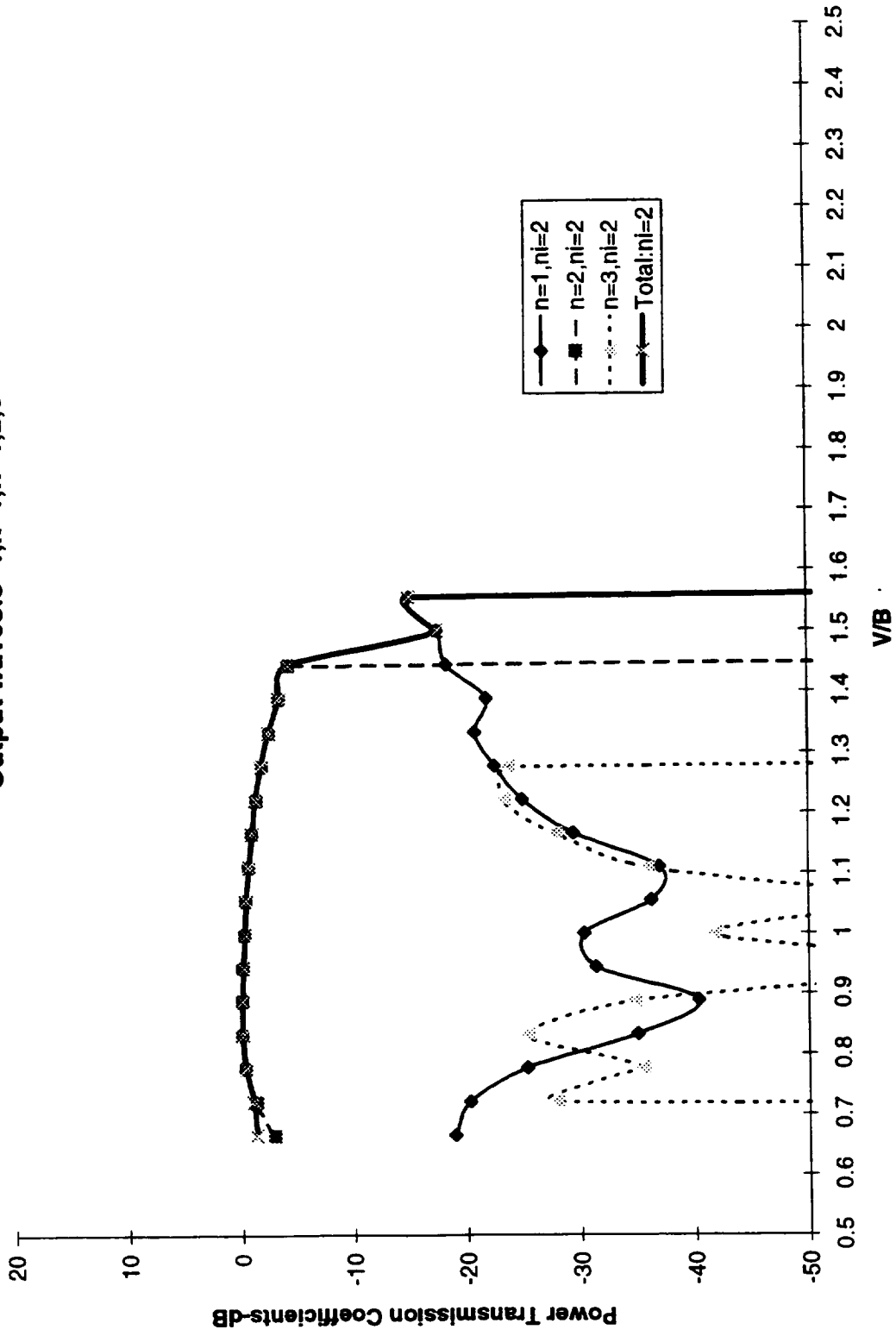
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

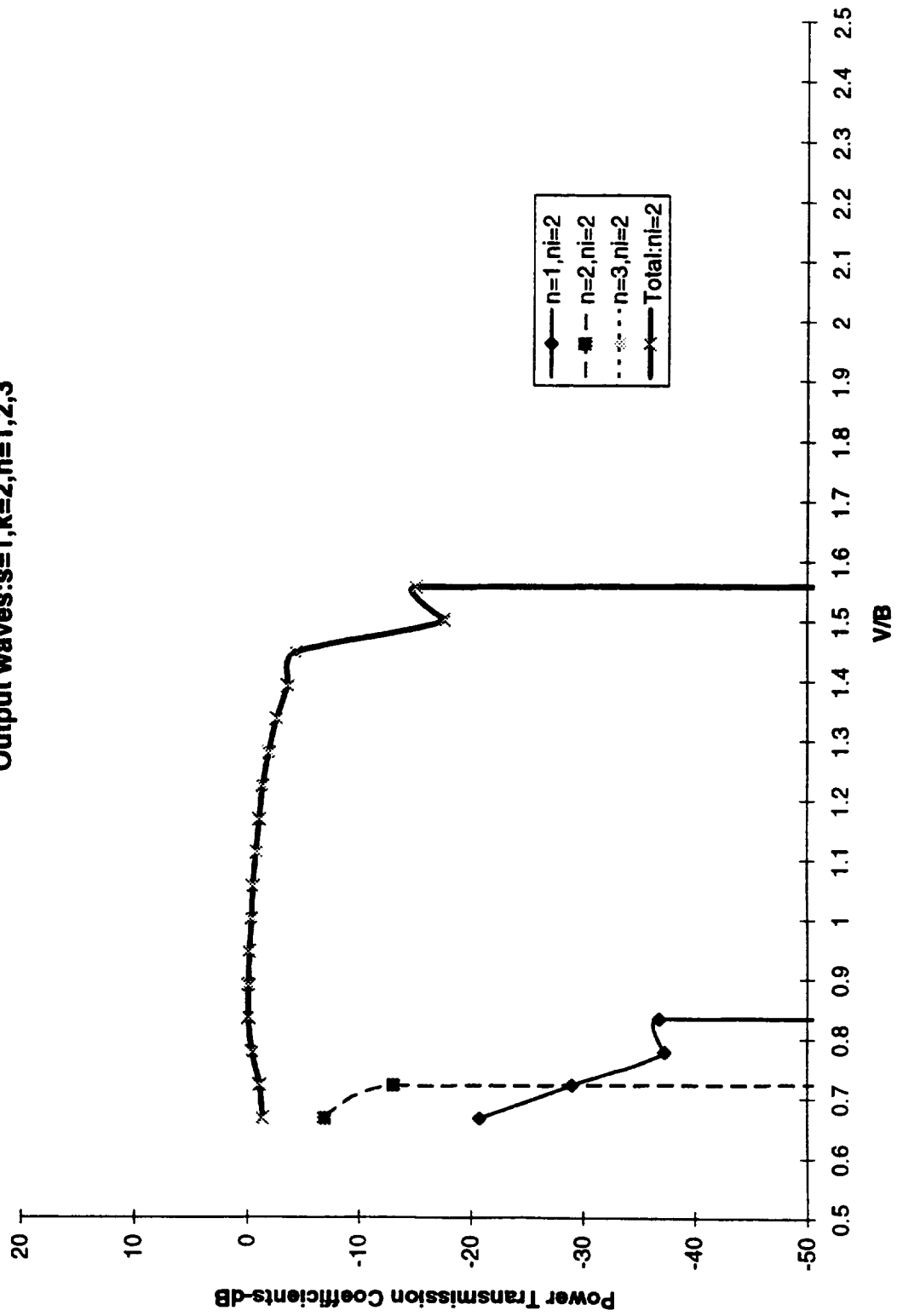
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

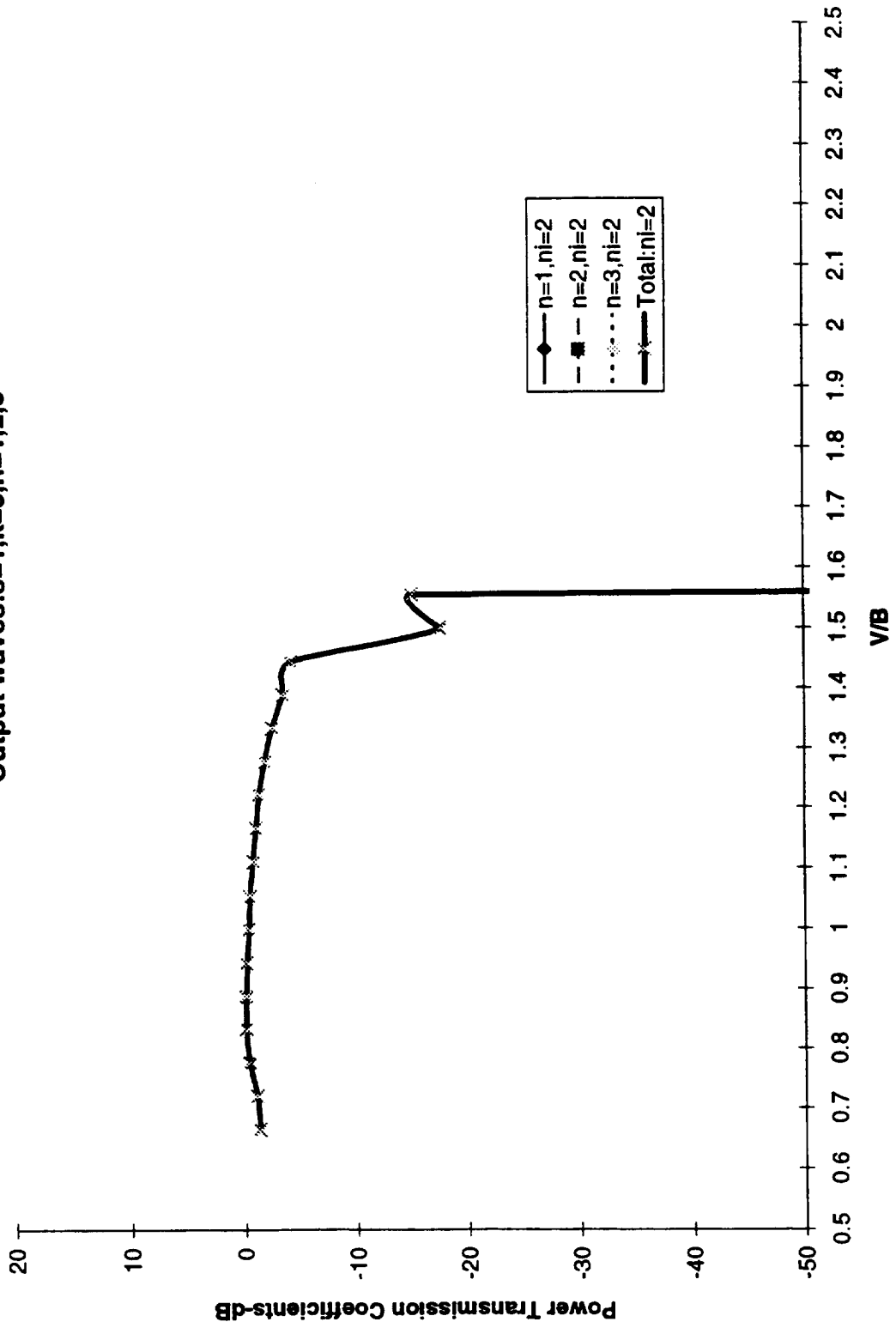
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

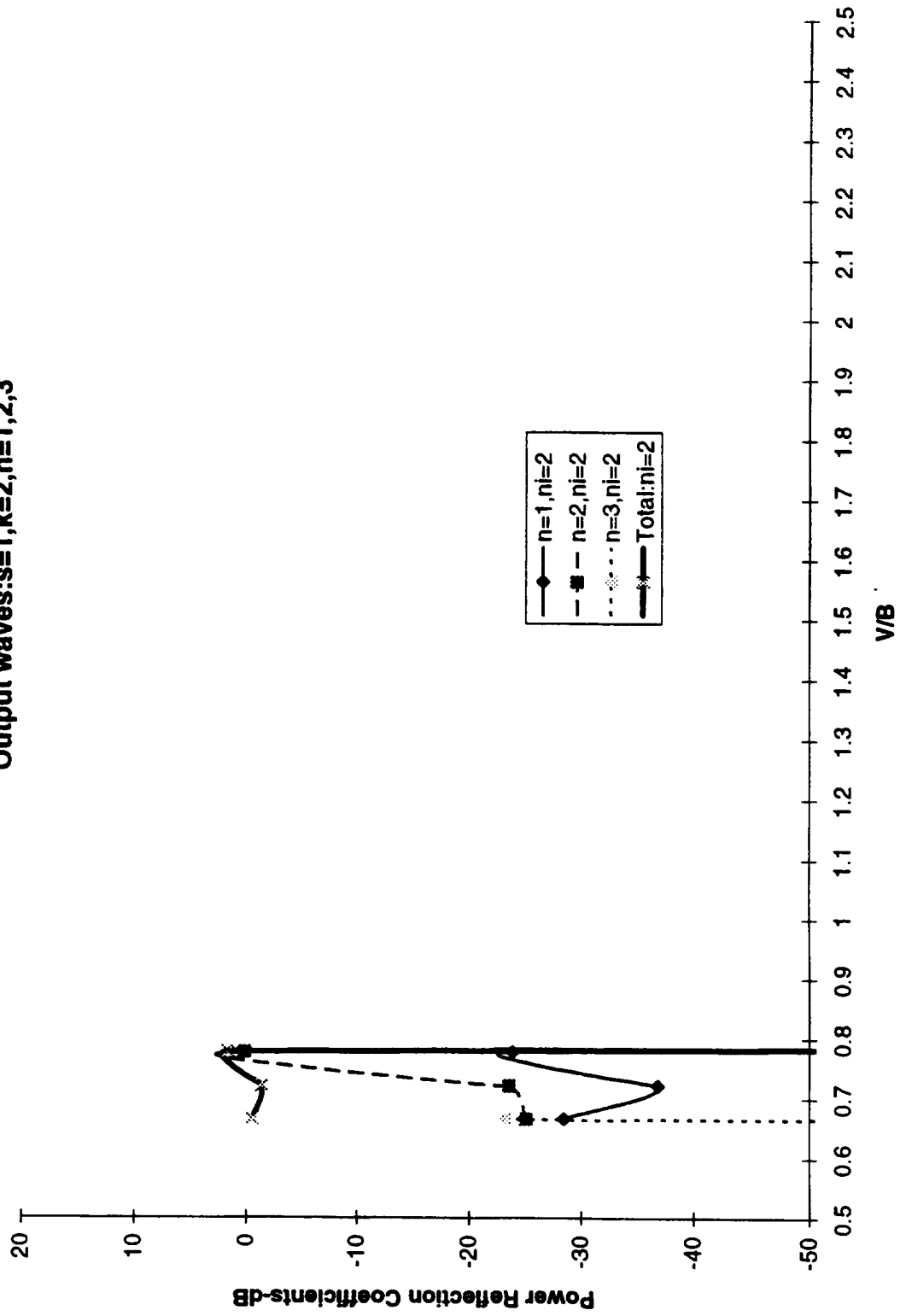
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

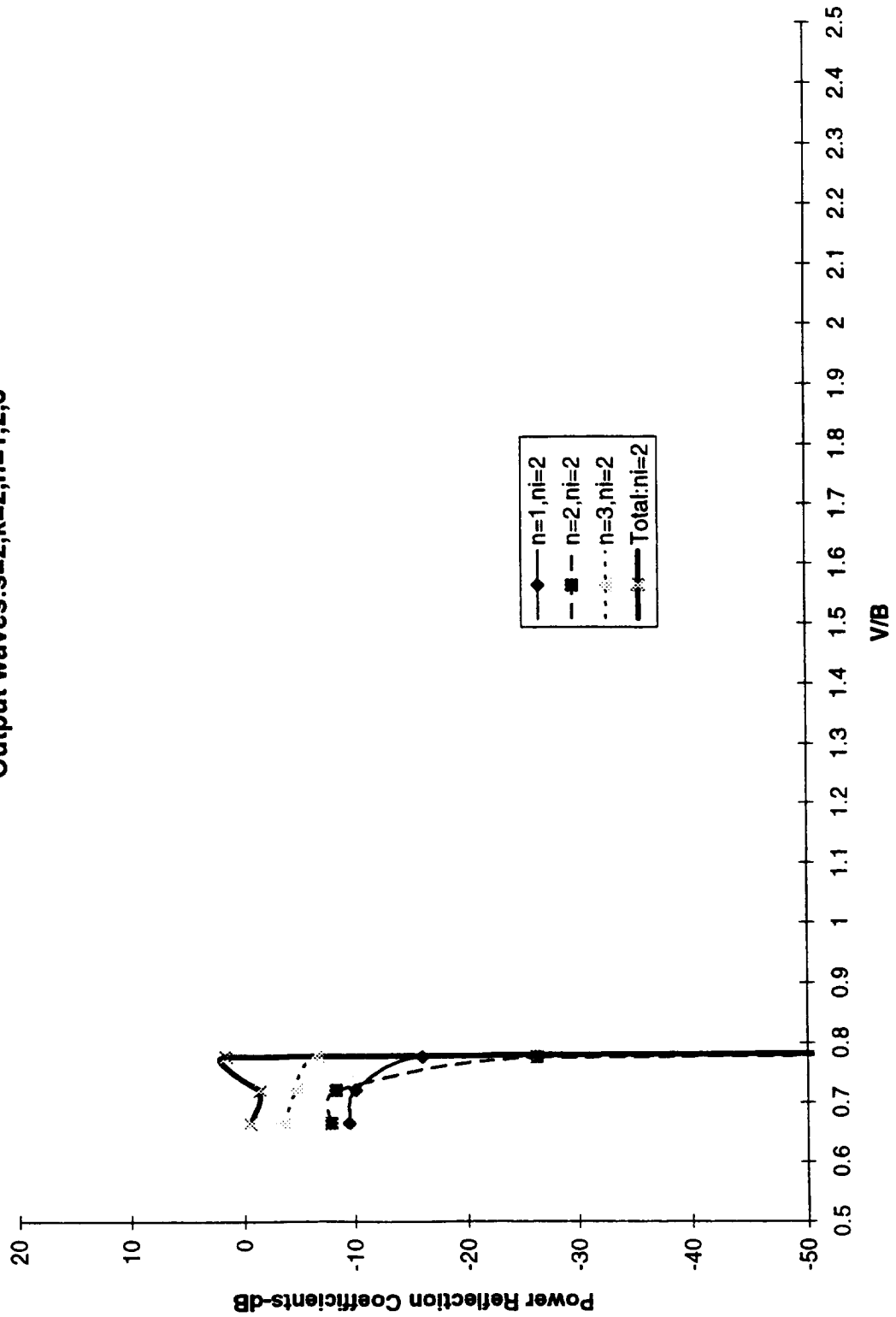
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

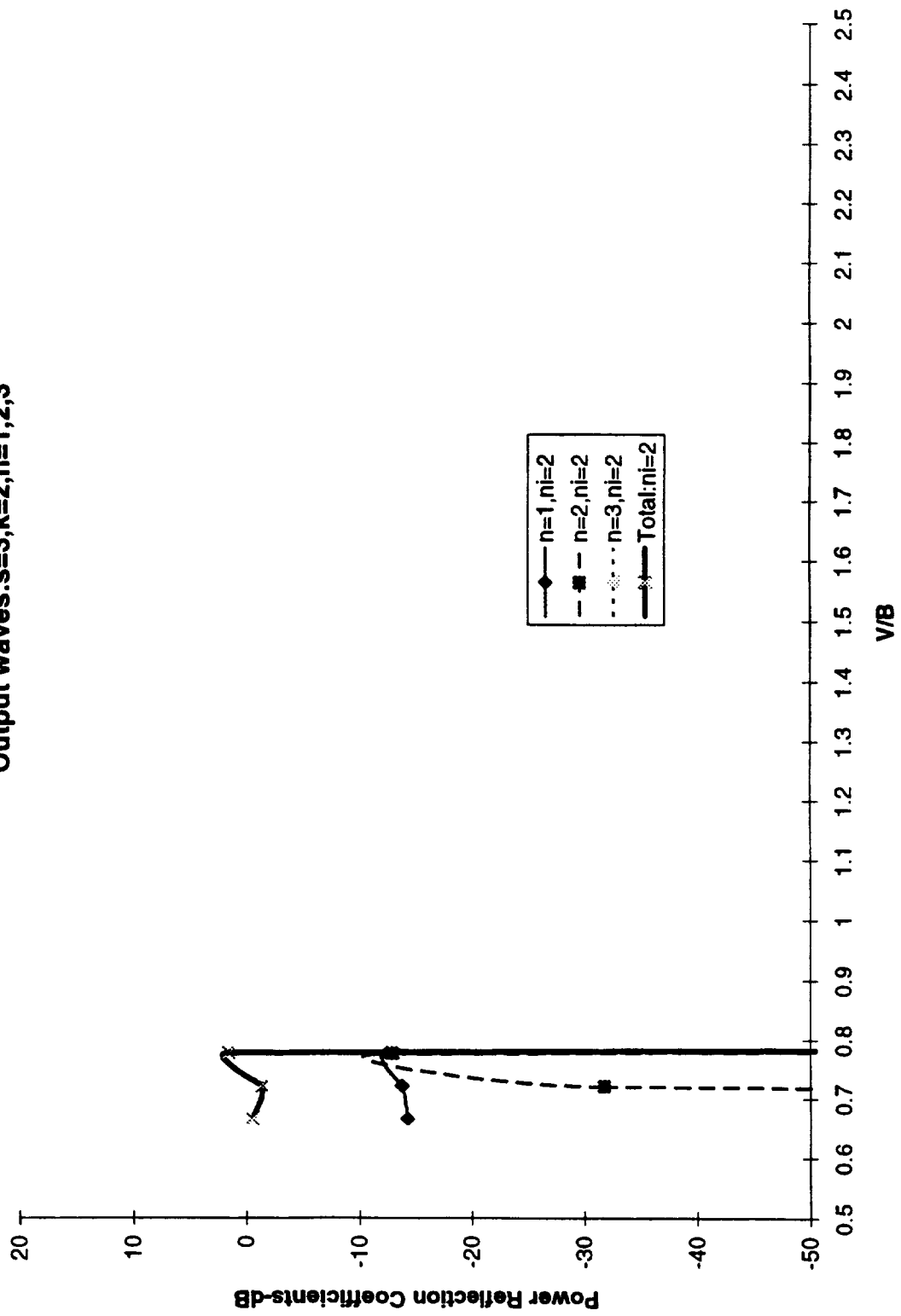
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

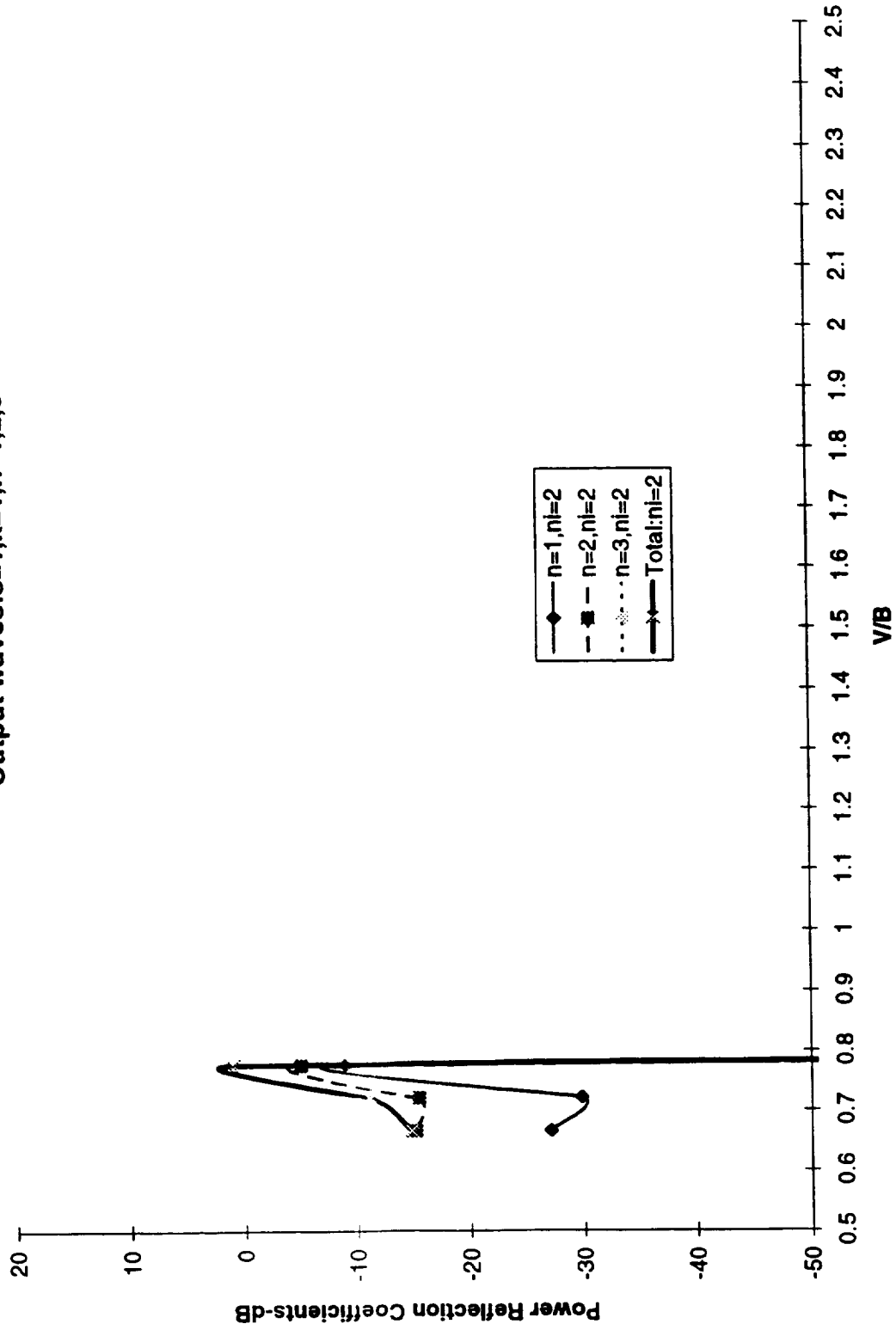
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

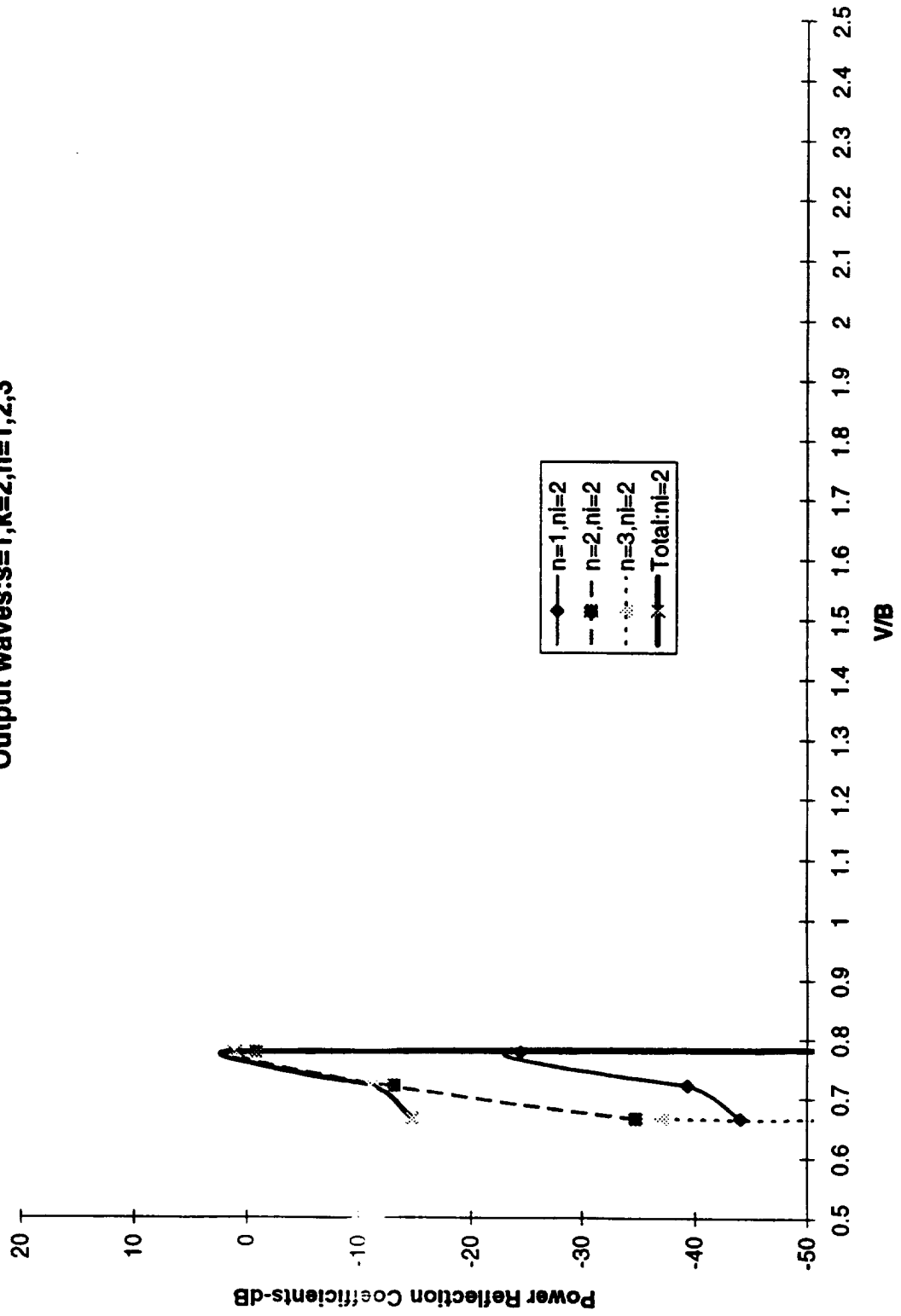
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_l=1, k_l=2, n_l=2$

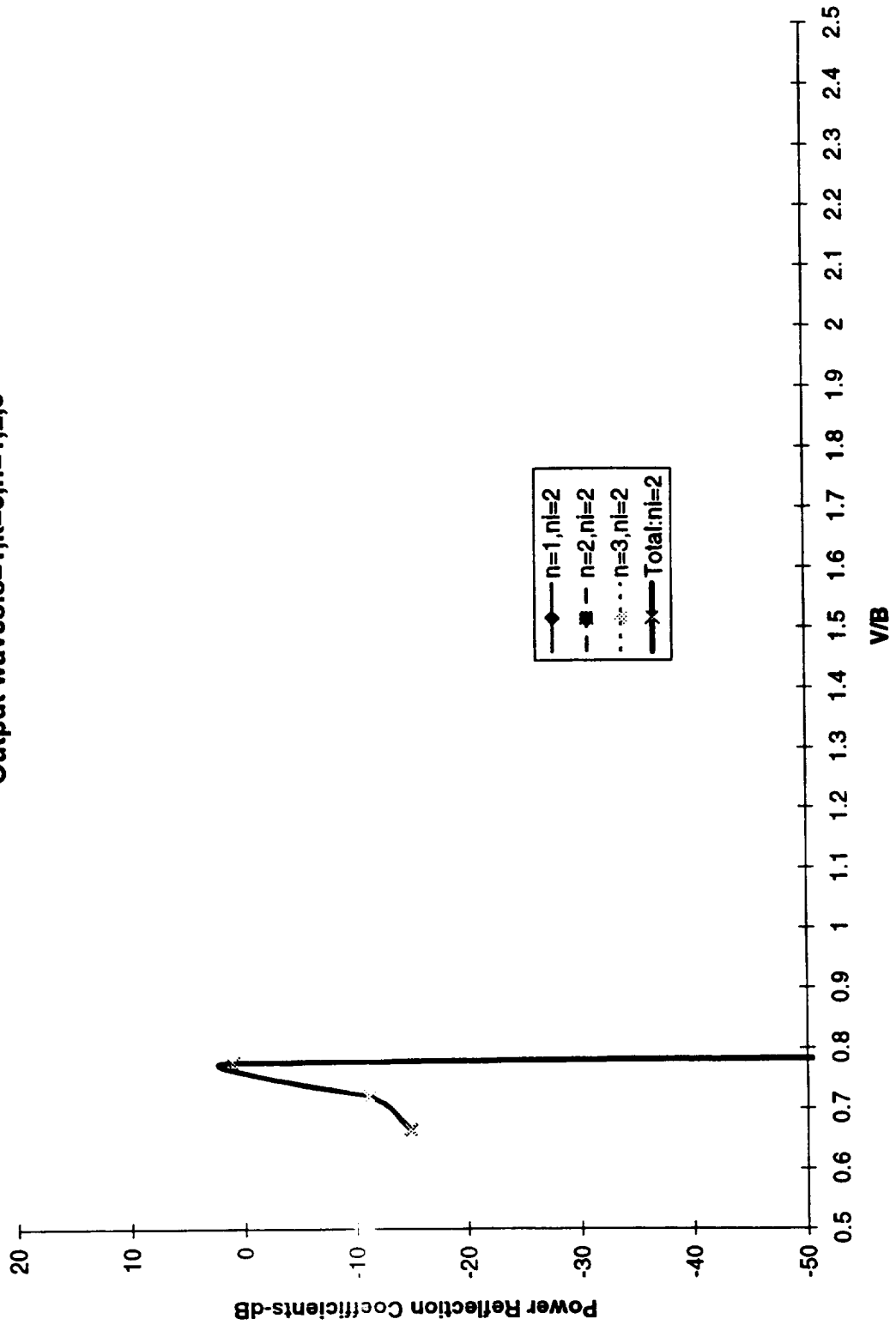
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

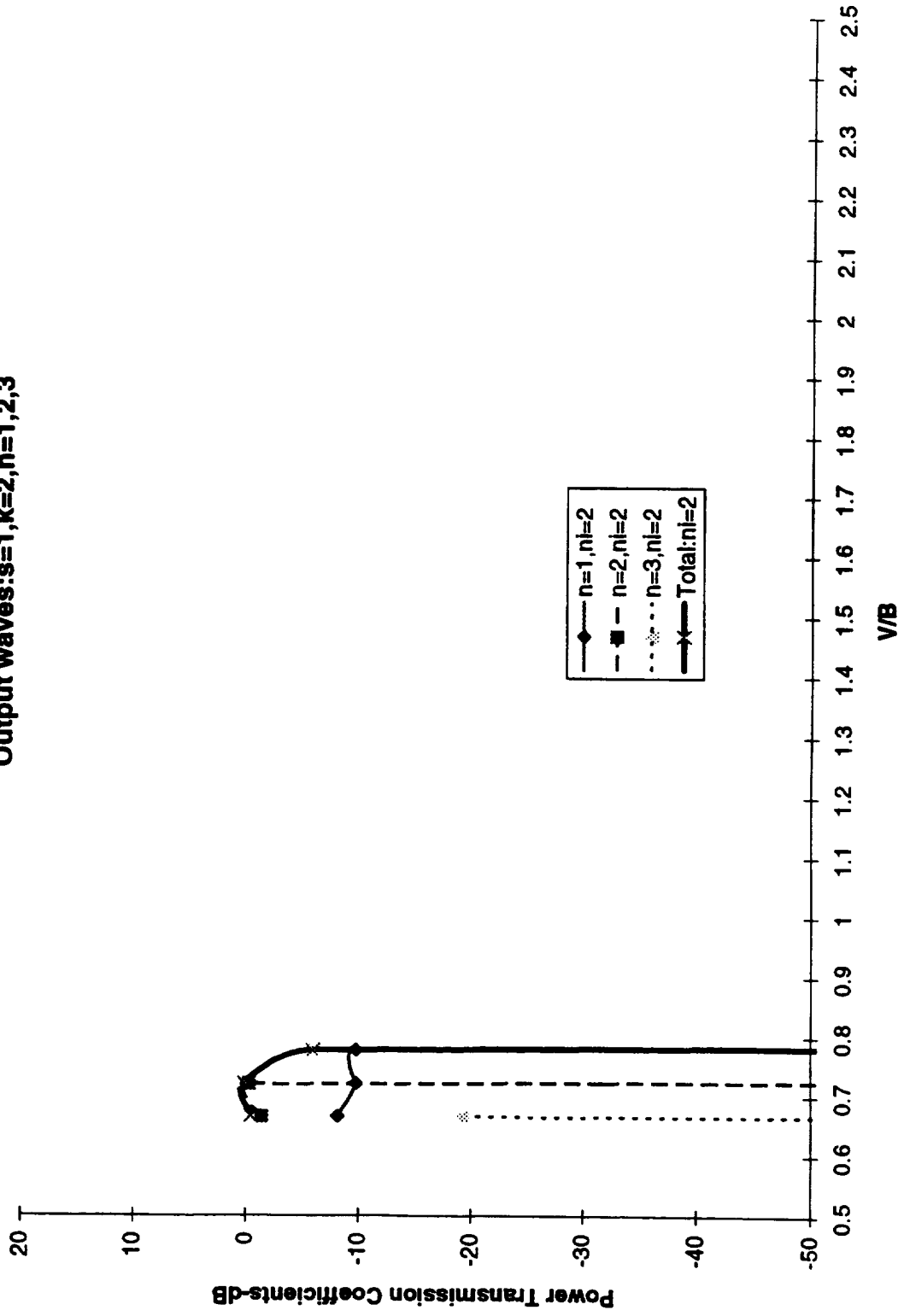
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

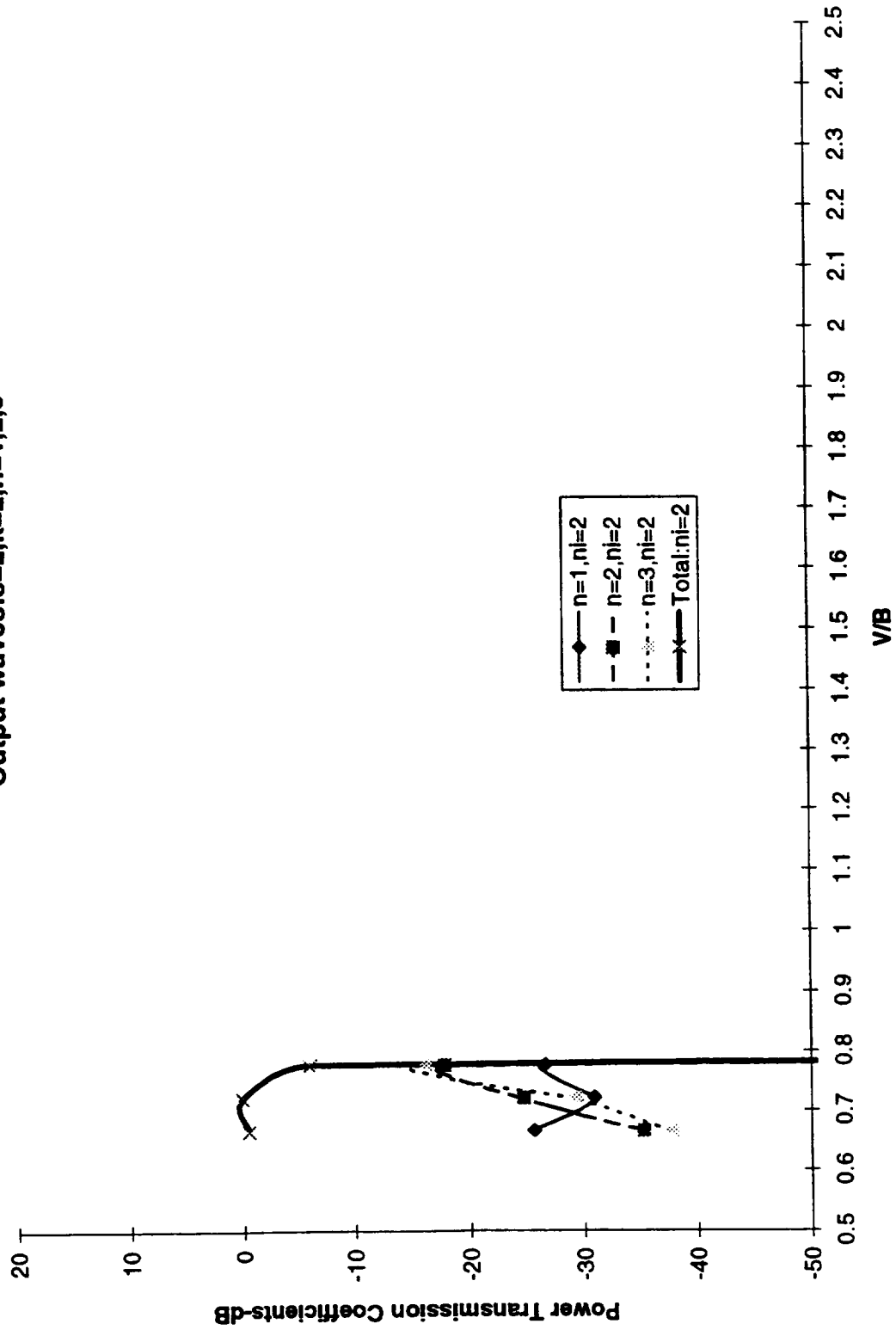
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

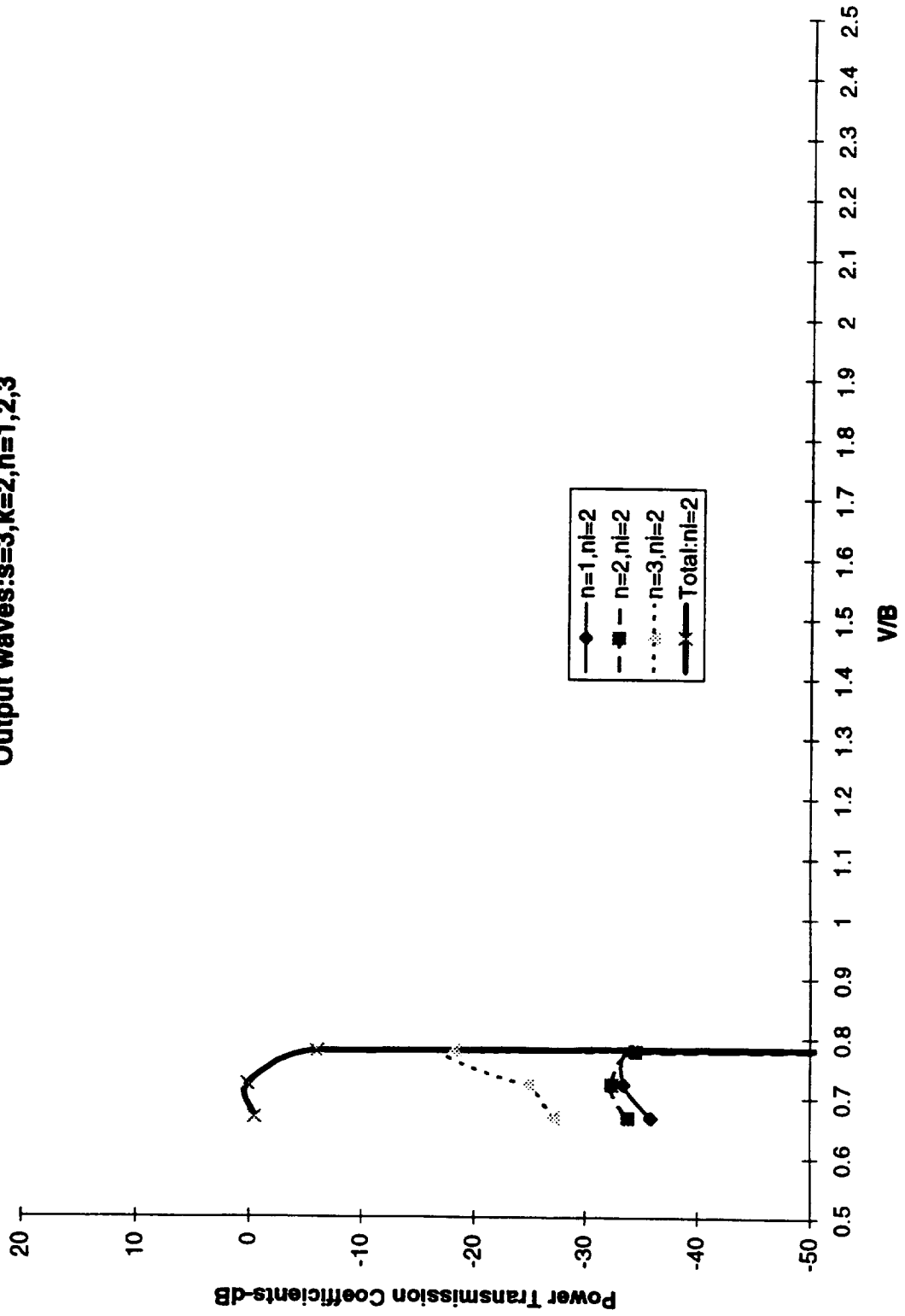
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

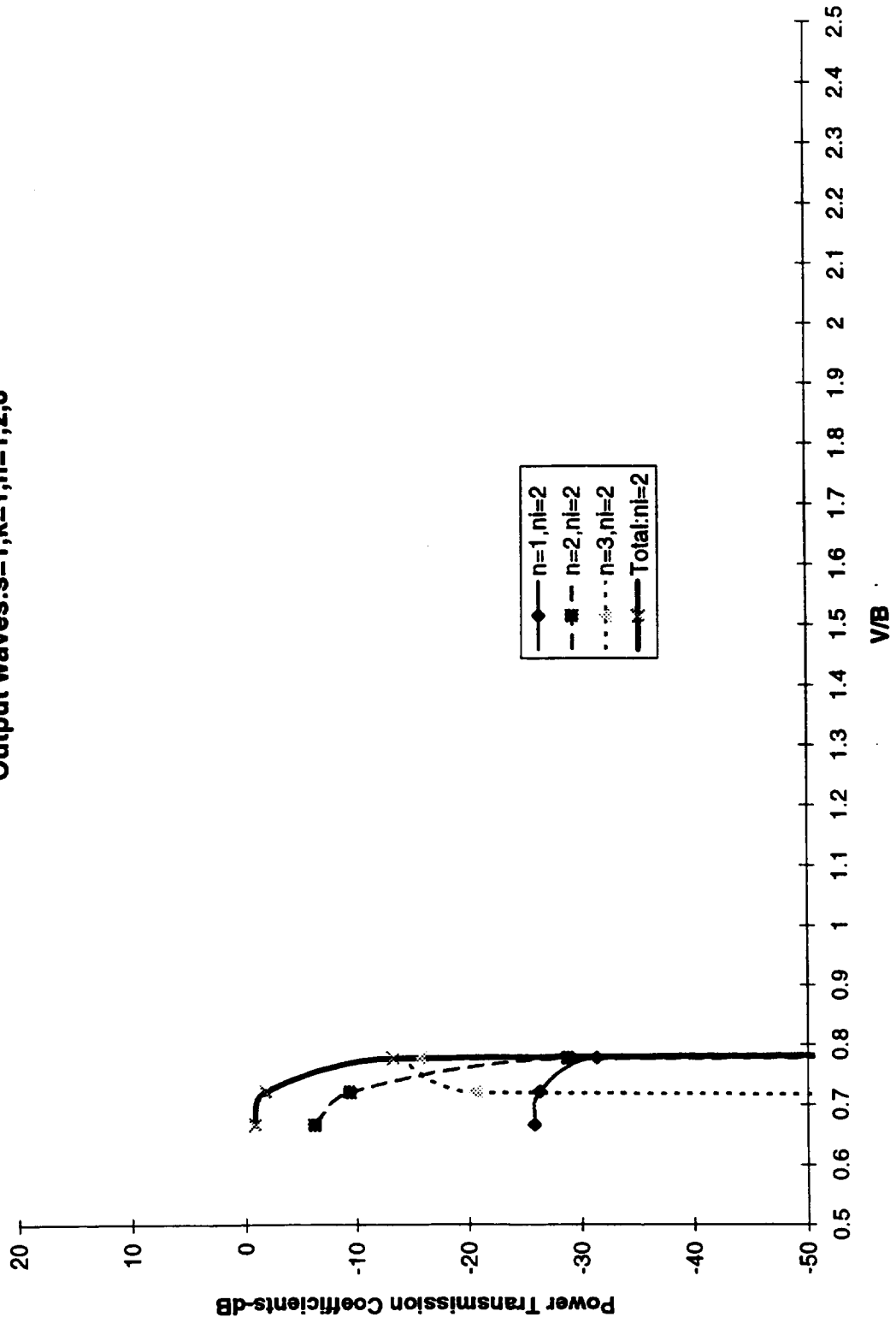
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_l=1, k_l=2, n_l=2$

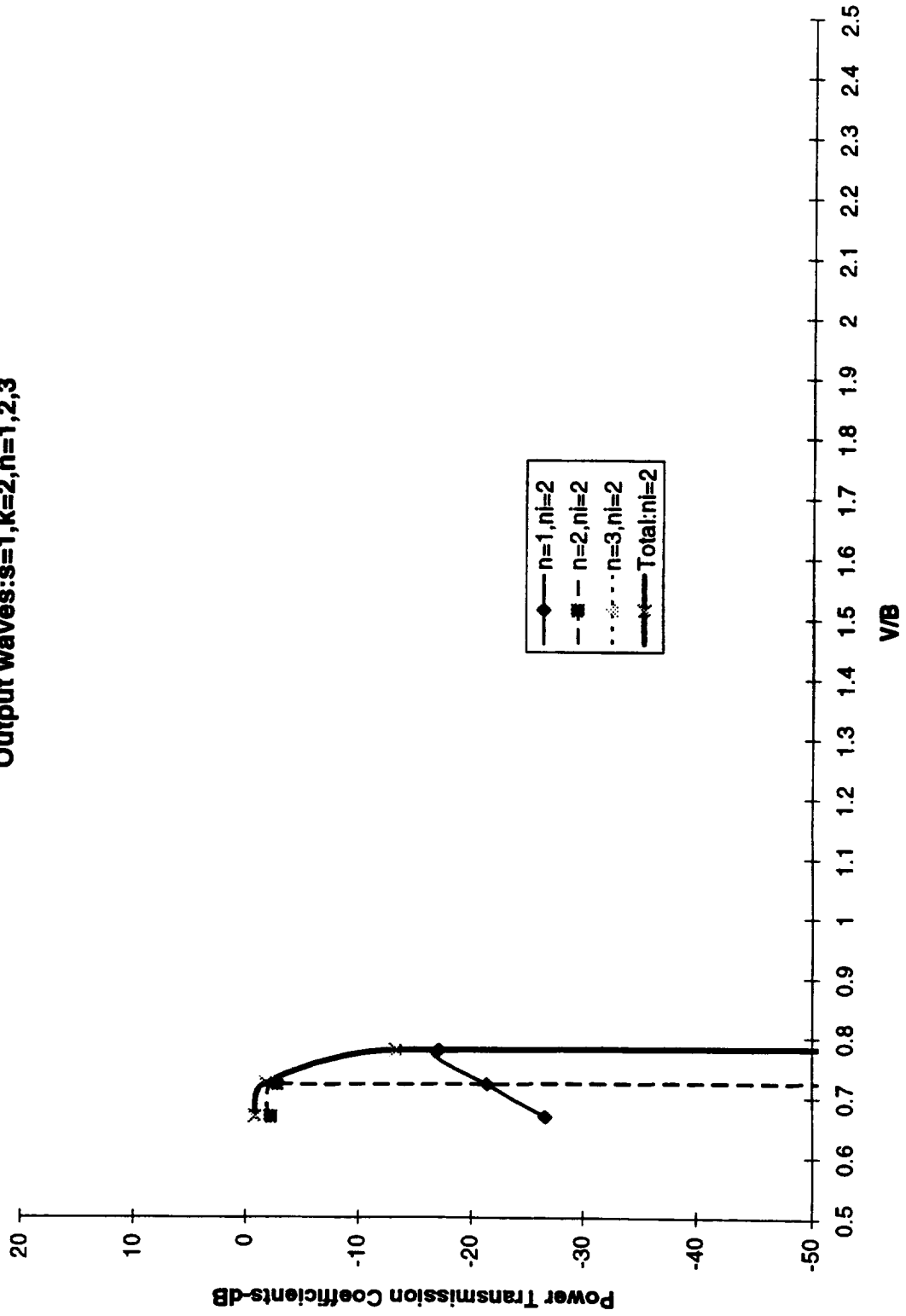
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_l=1, k_l=2, n_l=2$

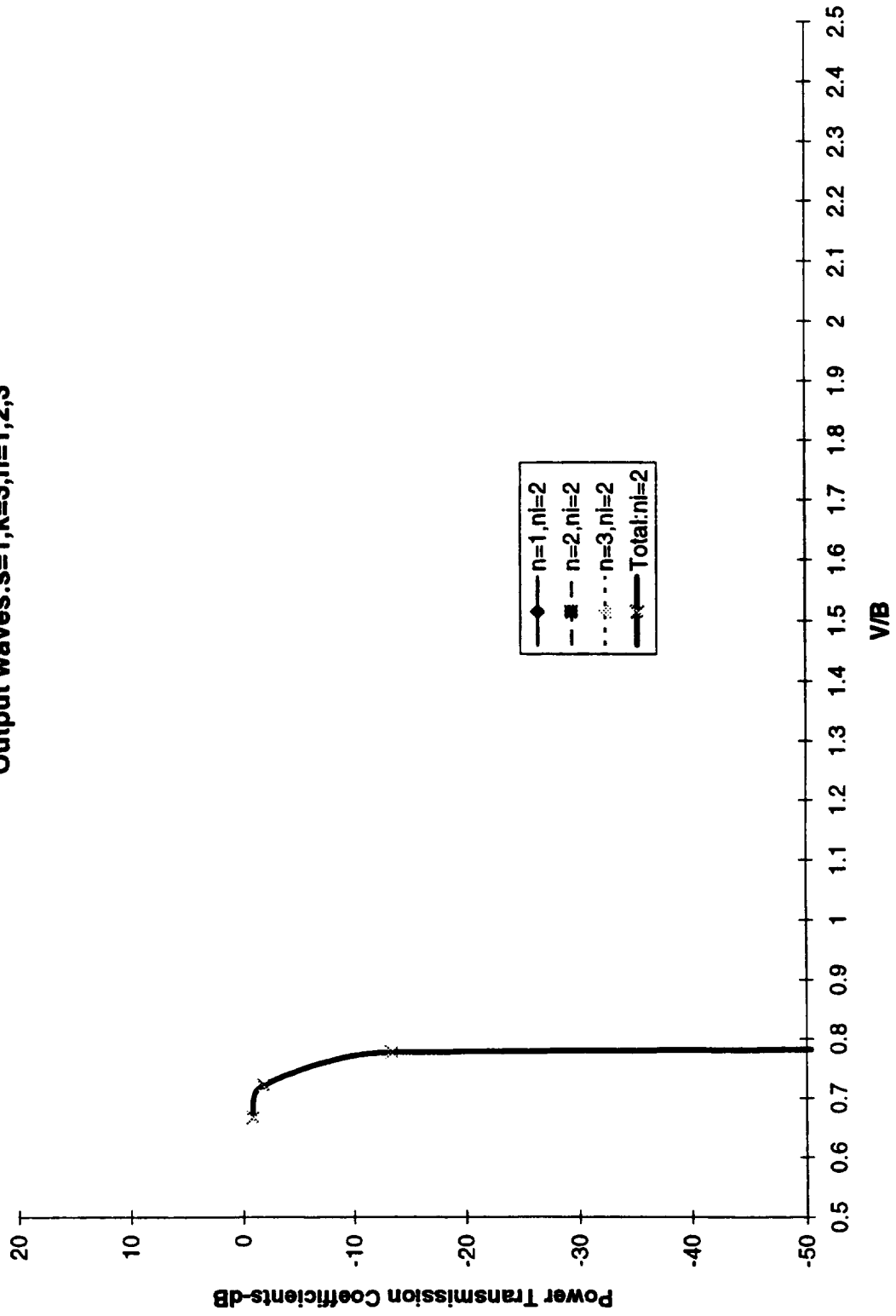
Output wave: $s=1, k=2, n=1, 2, 3$



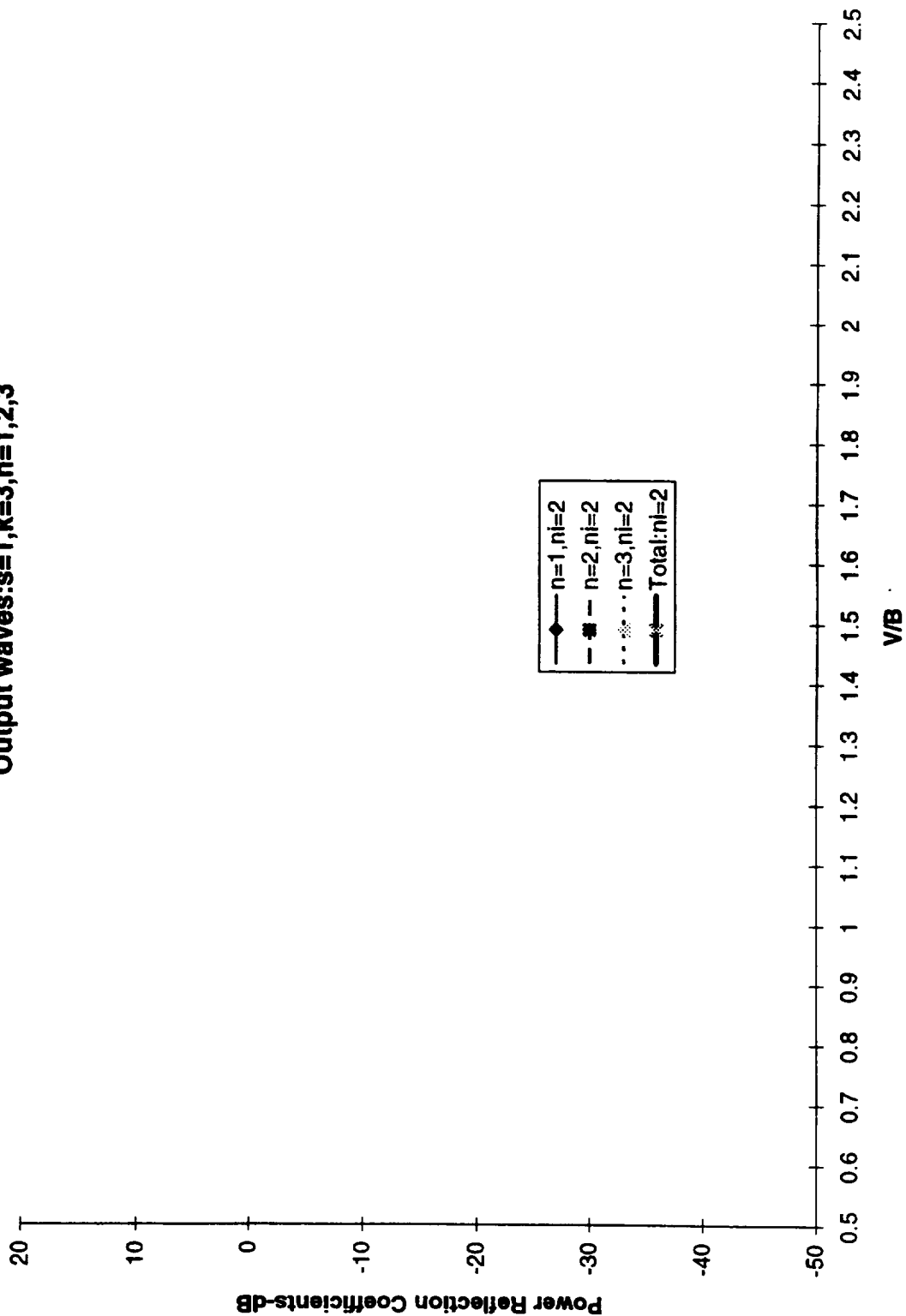
Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

Output waves: $s=1, k=3, n=1, 2, 3$



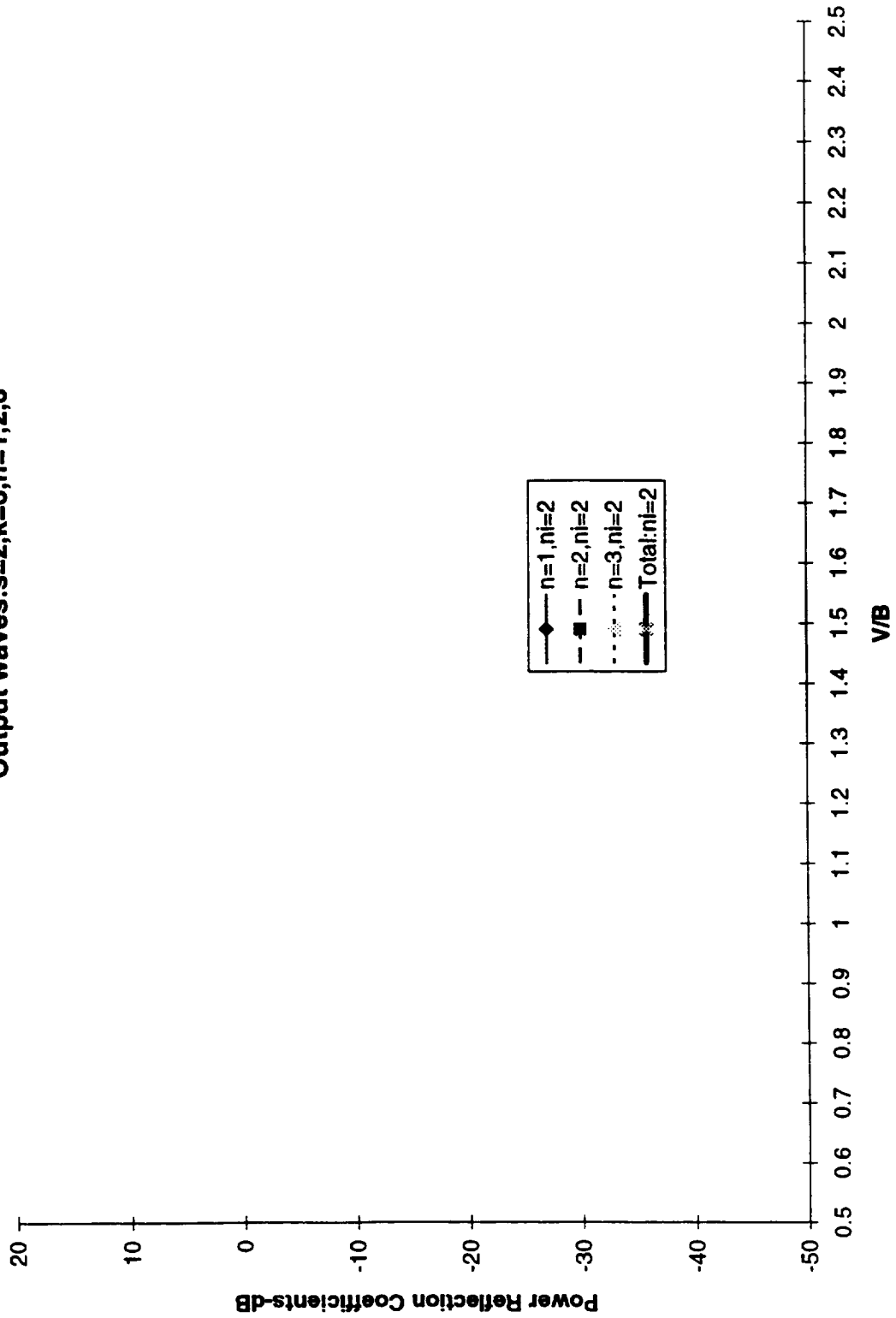
Rotor Reflection-High Speed Case
Input wave: $s_l=1, k_l=3, n_l=2$
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

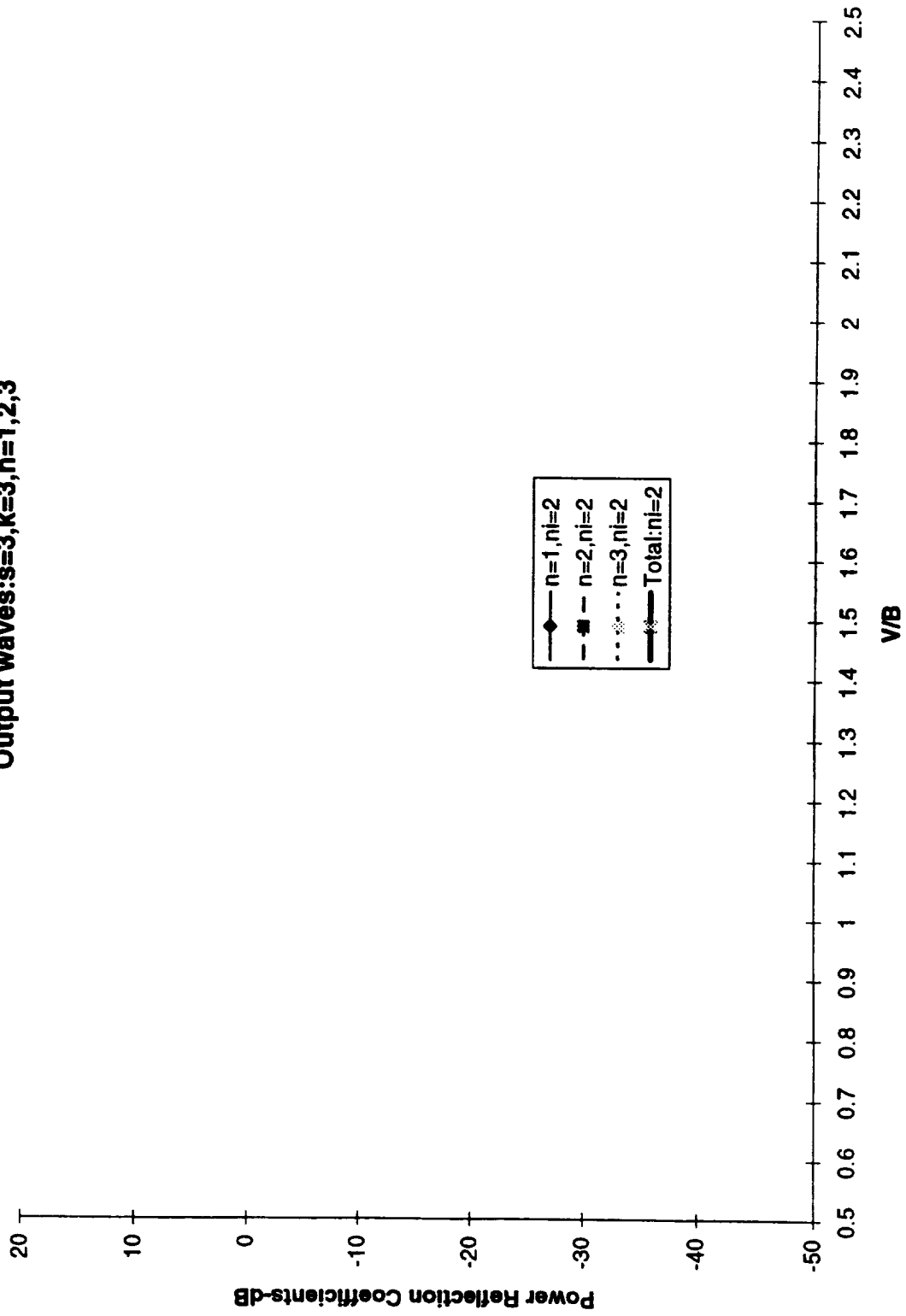
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

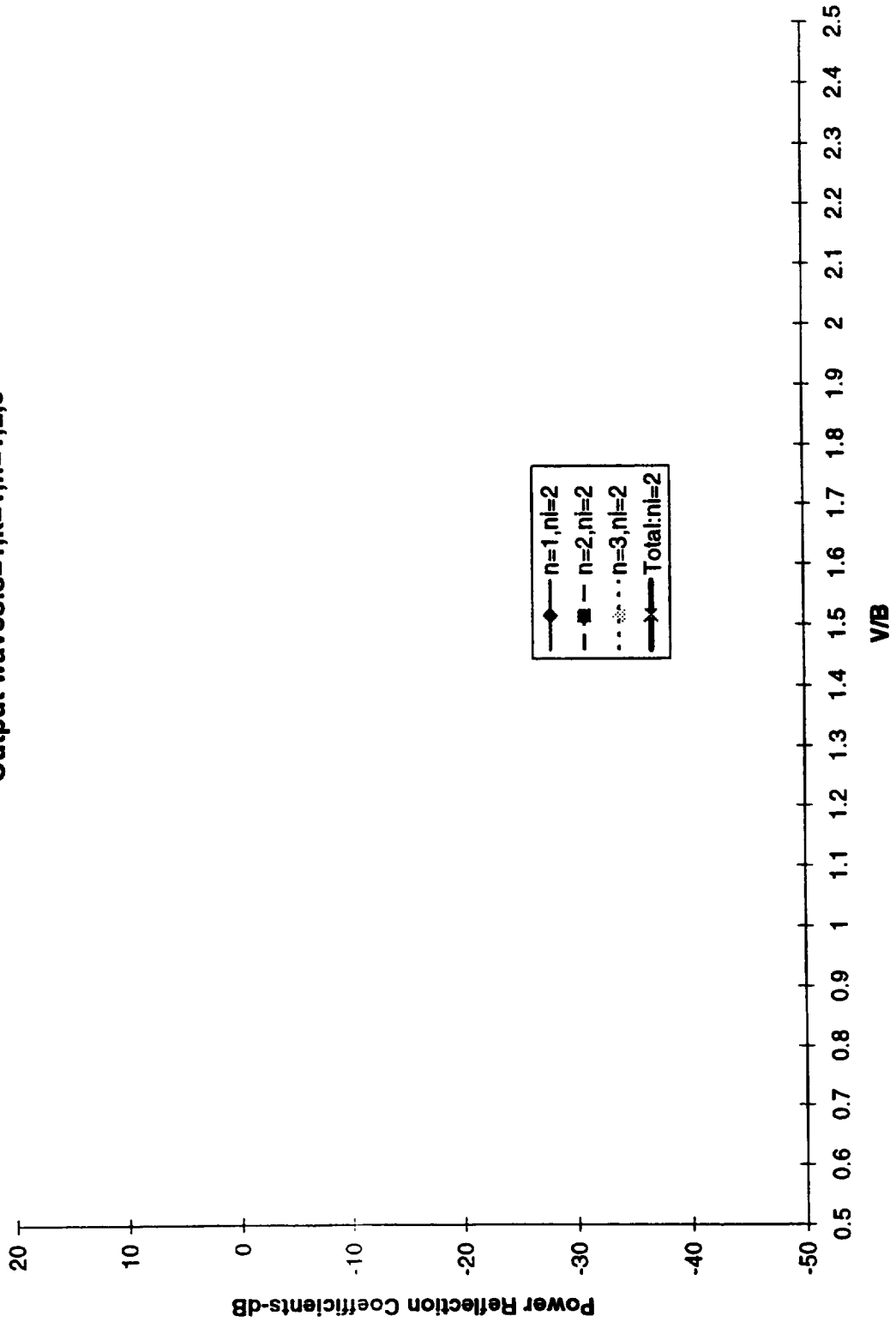
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_l=1, k_l=3, n_l=2$

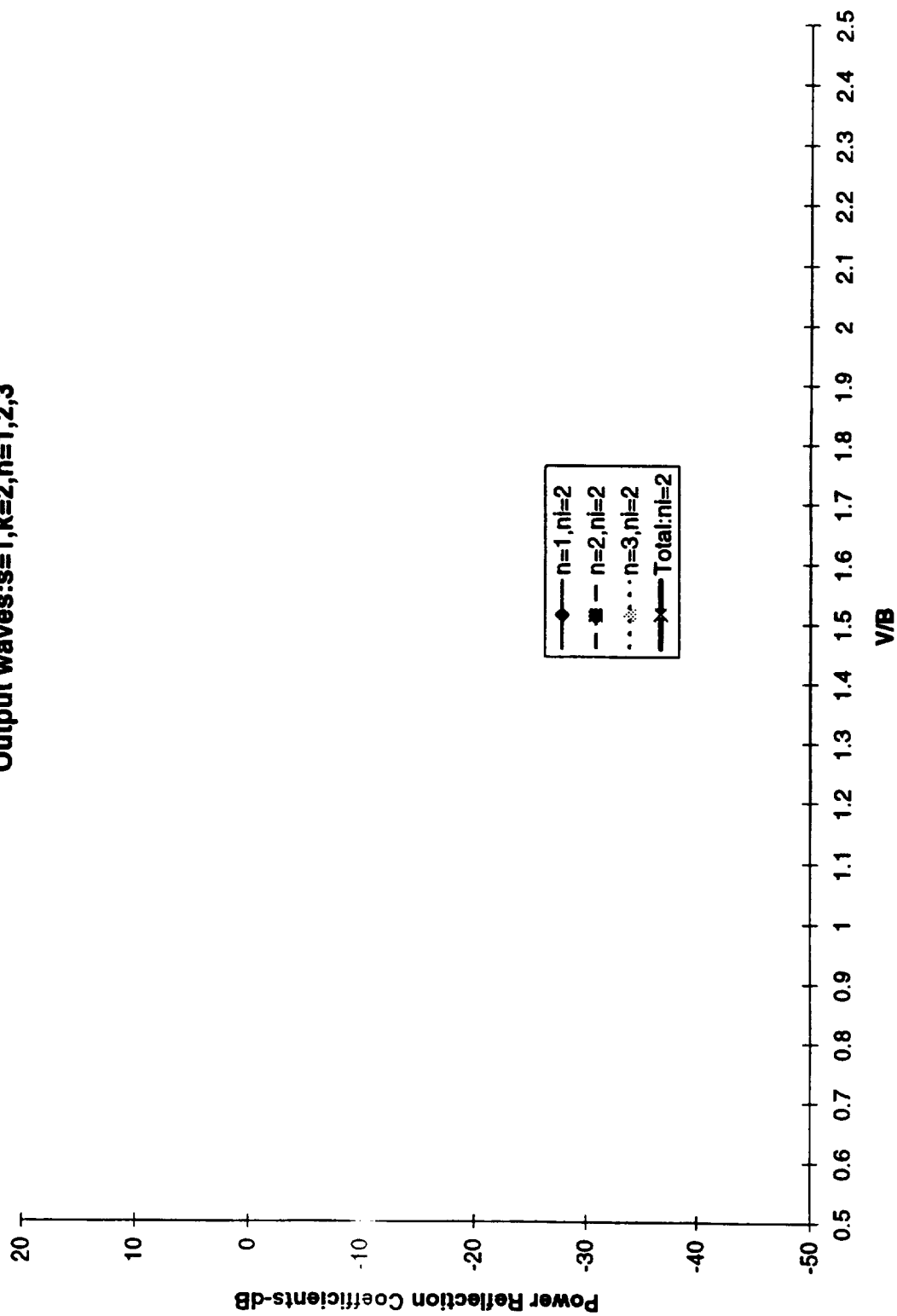
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_l=3, n_l=2$

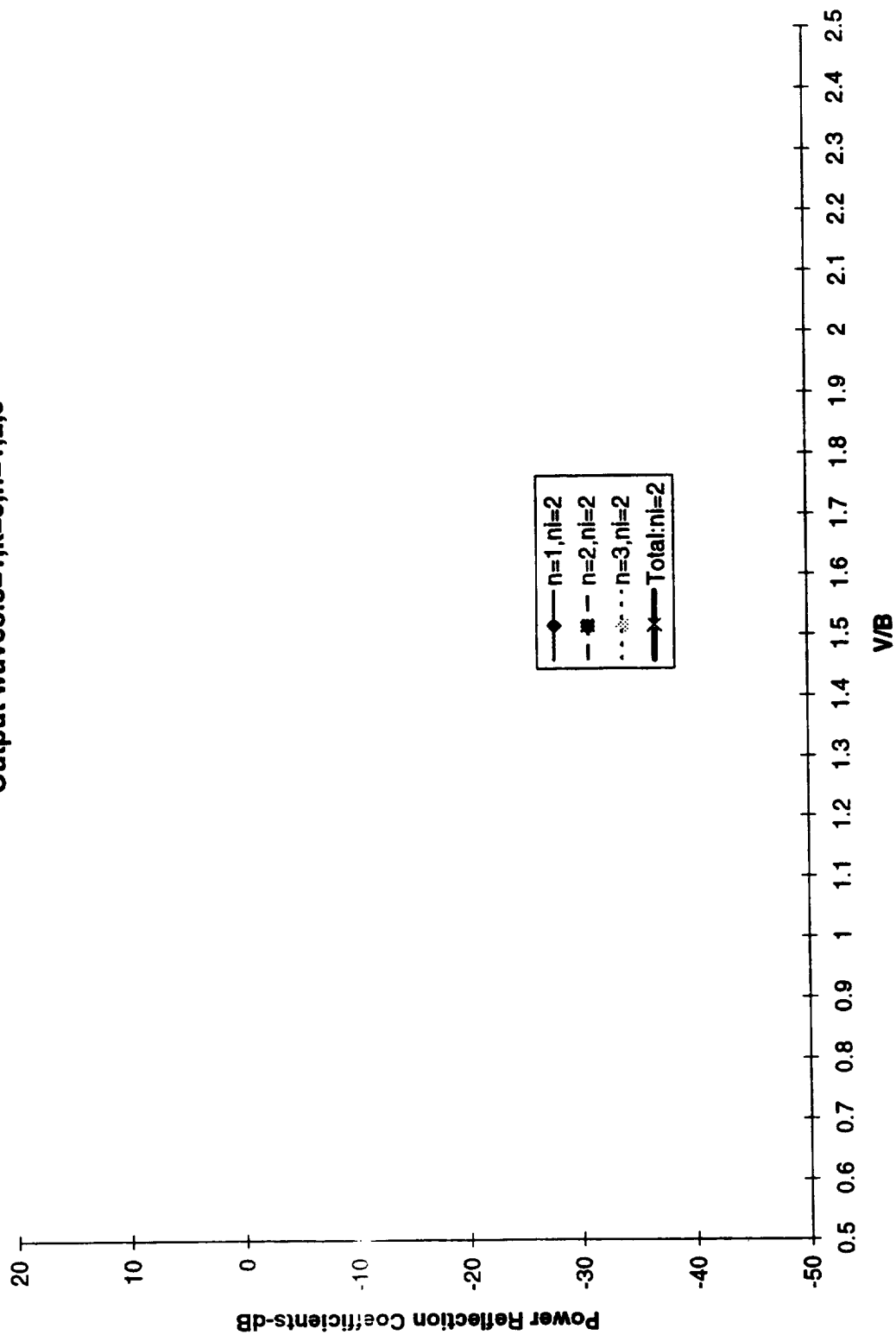
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

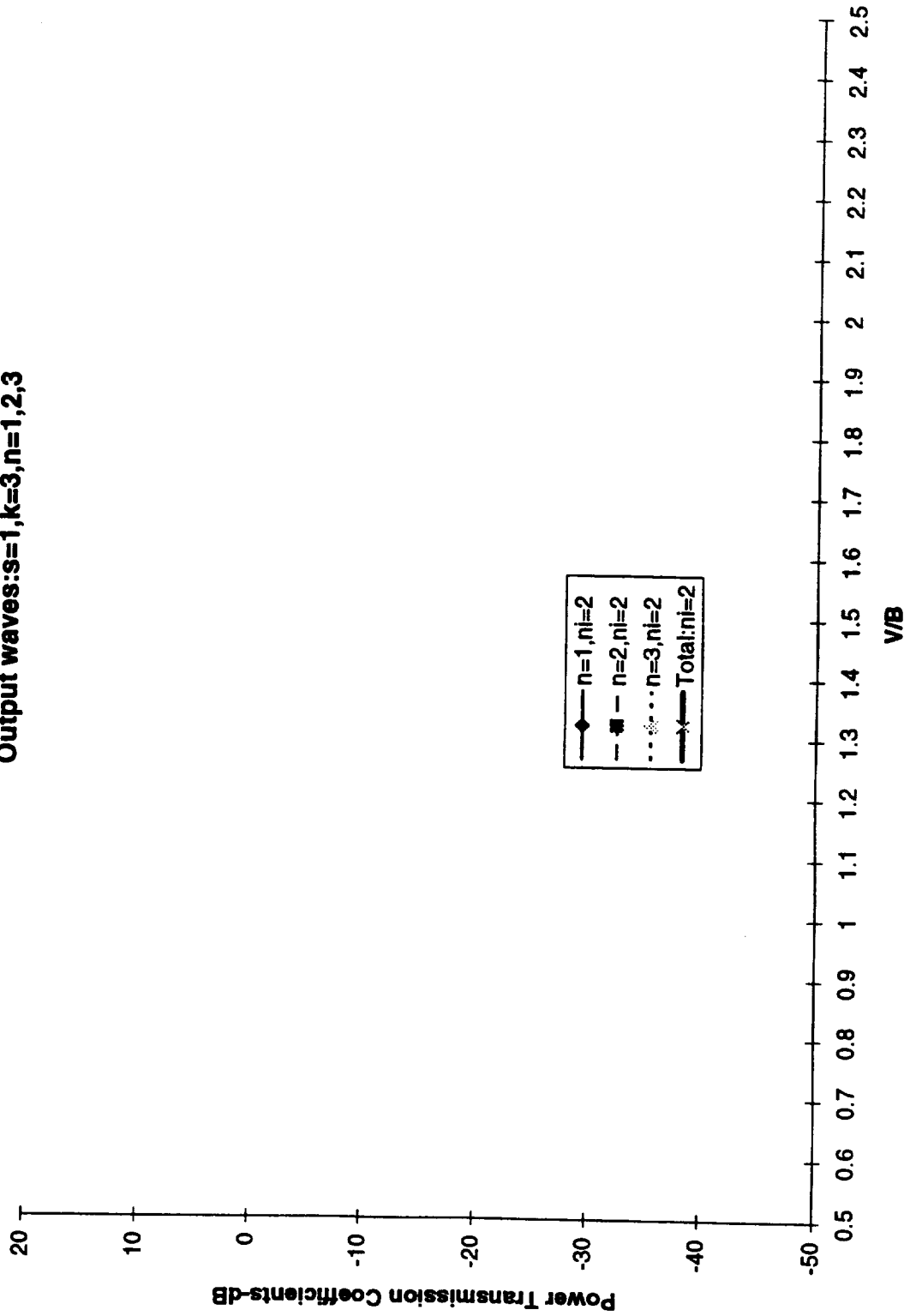
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

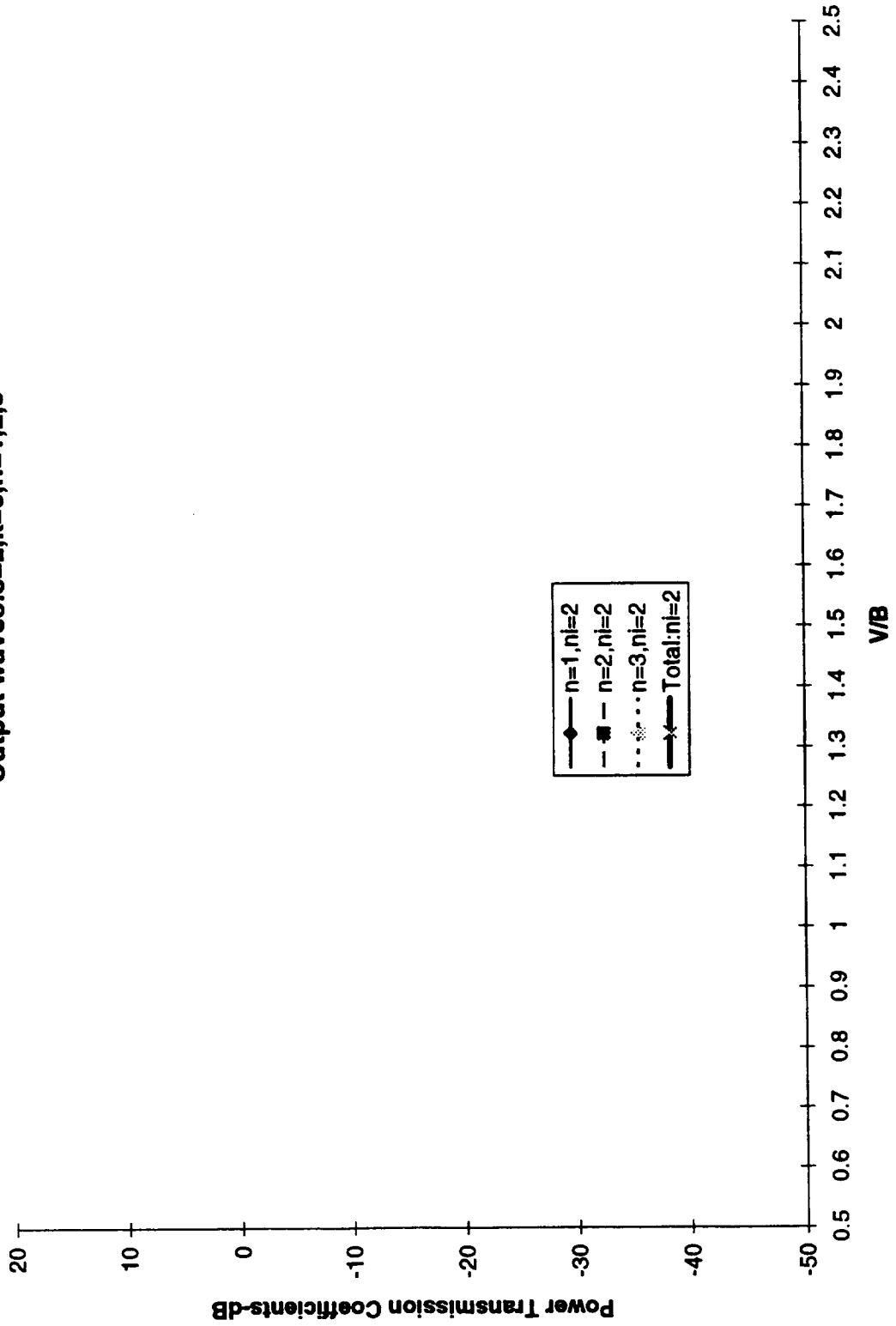
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

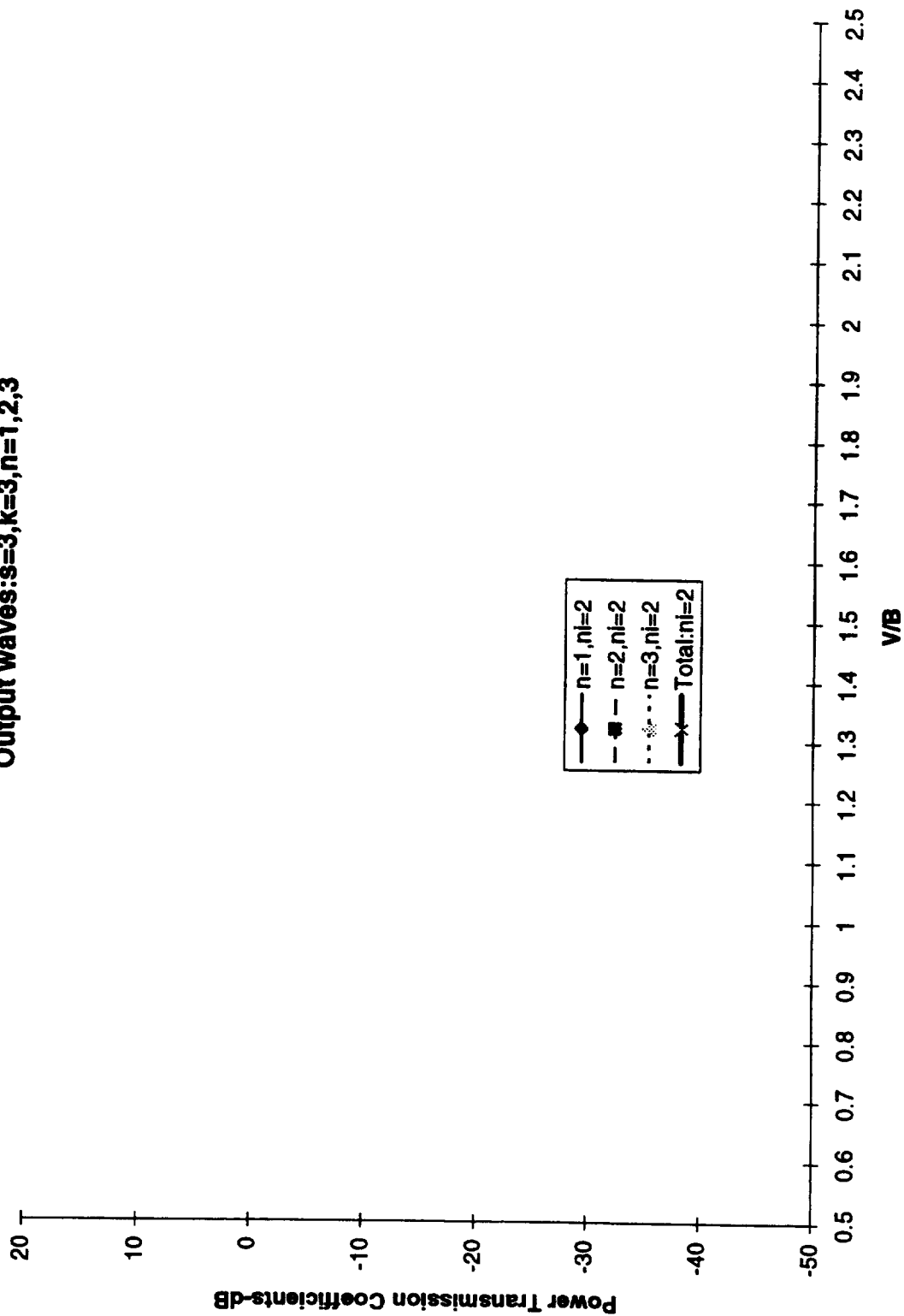
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

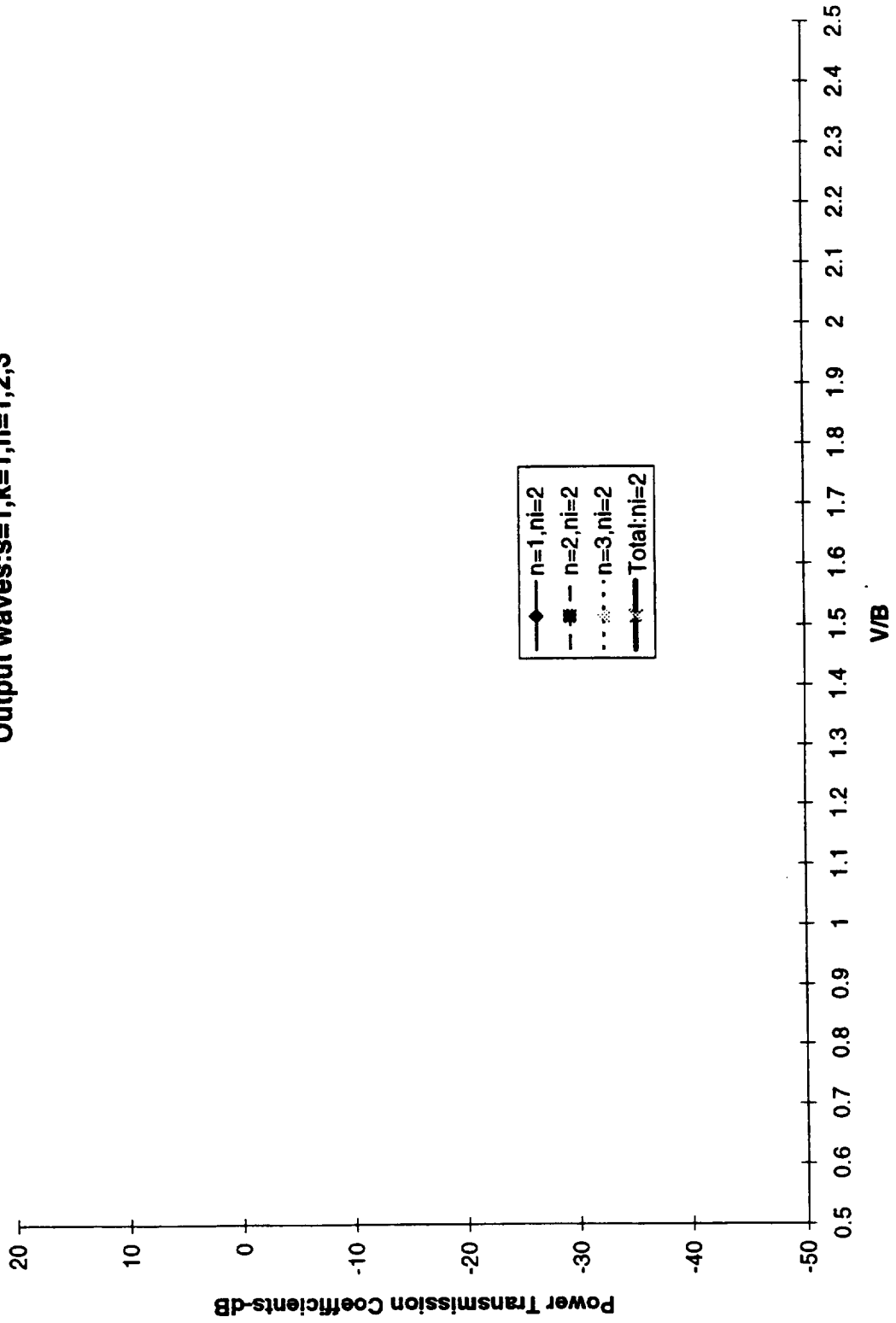
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

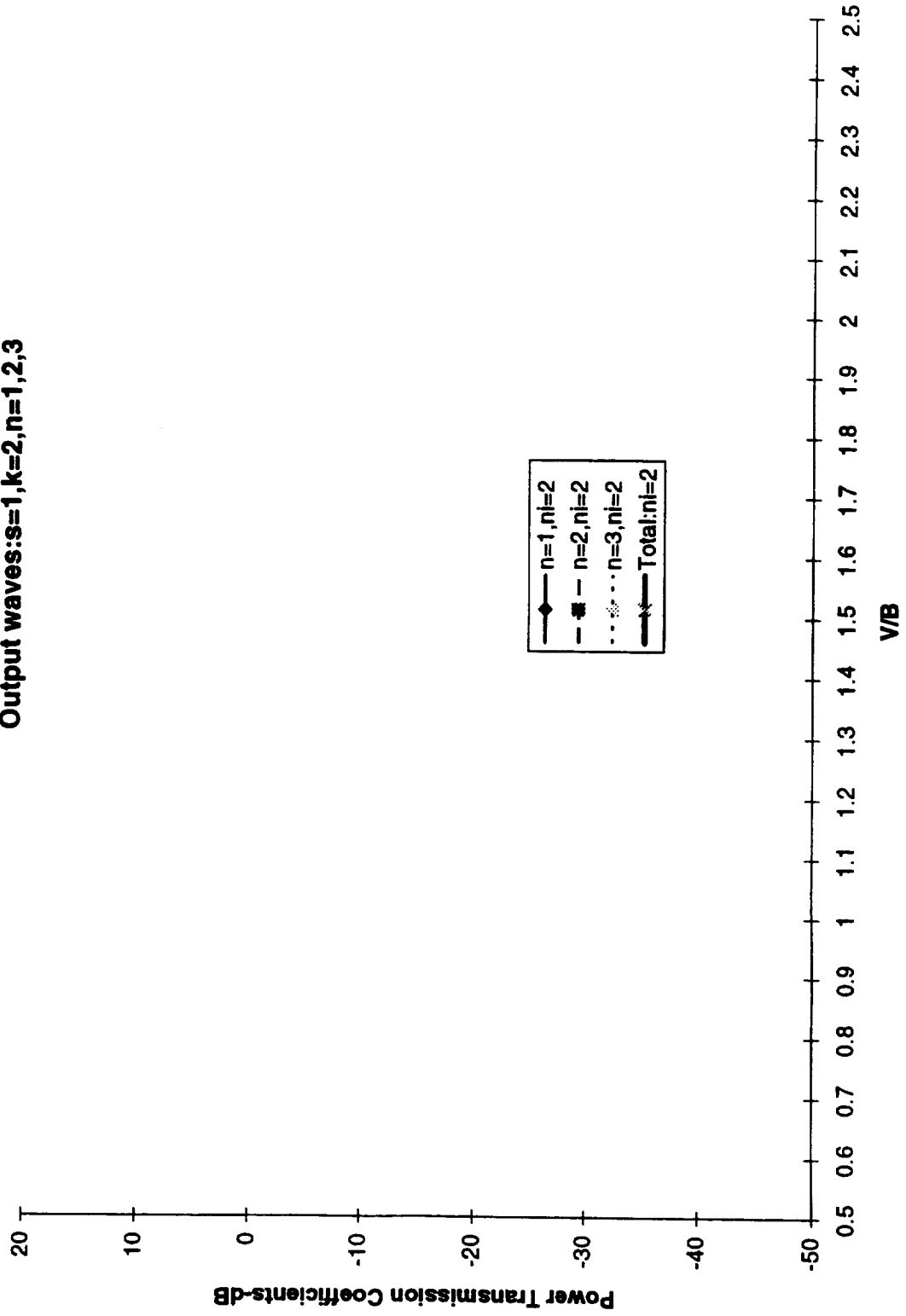
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

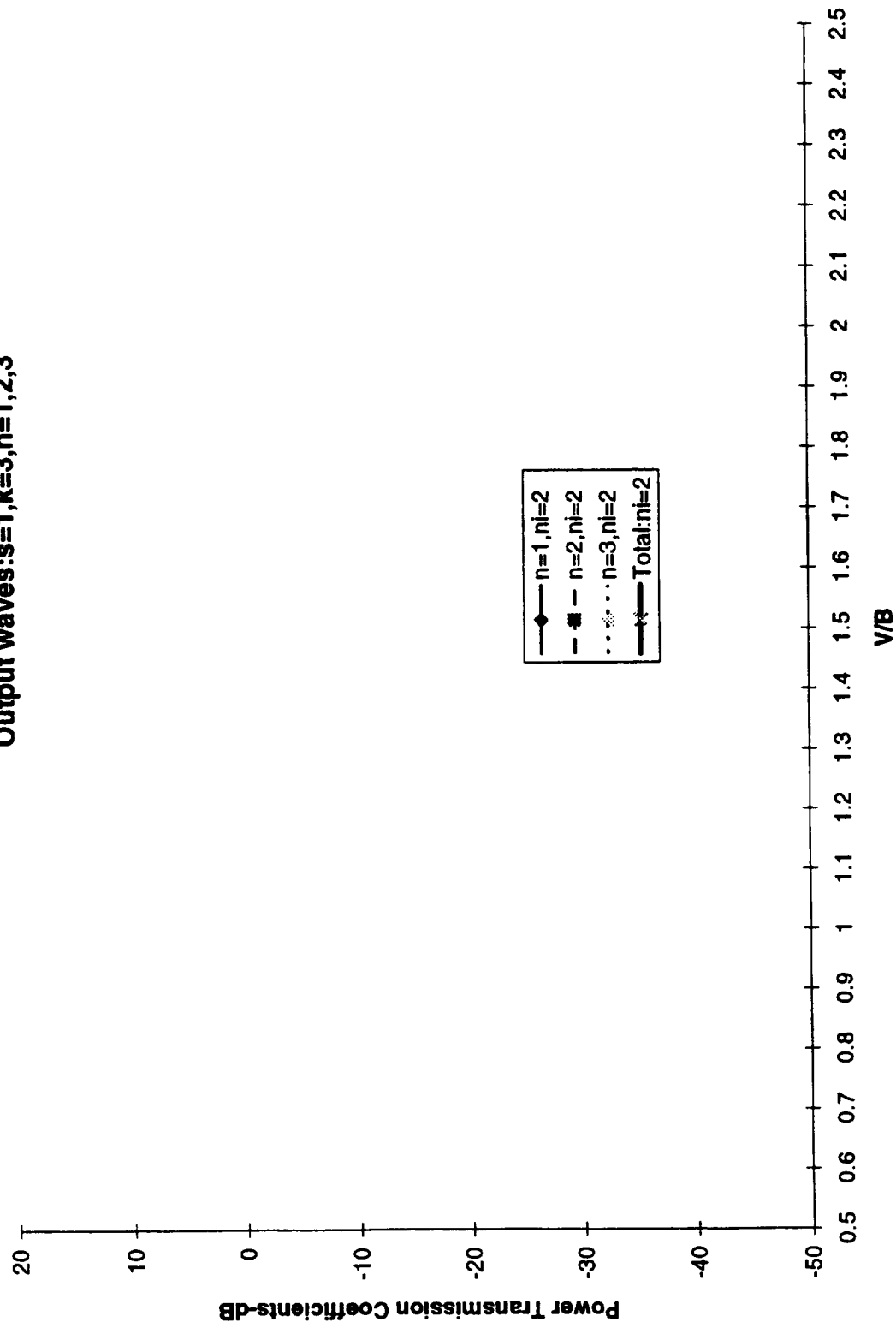
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

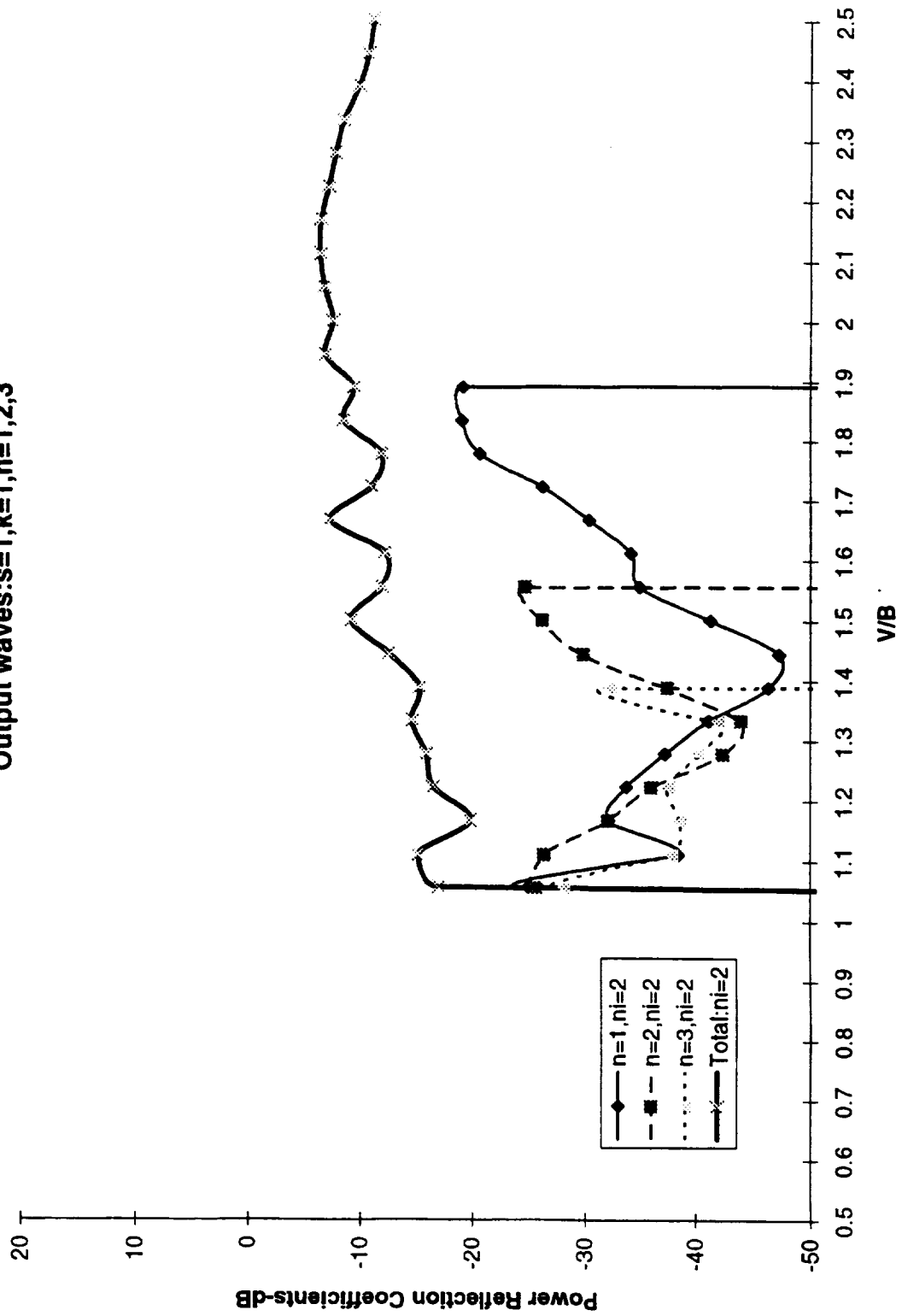
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

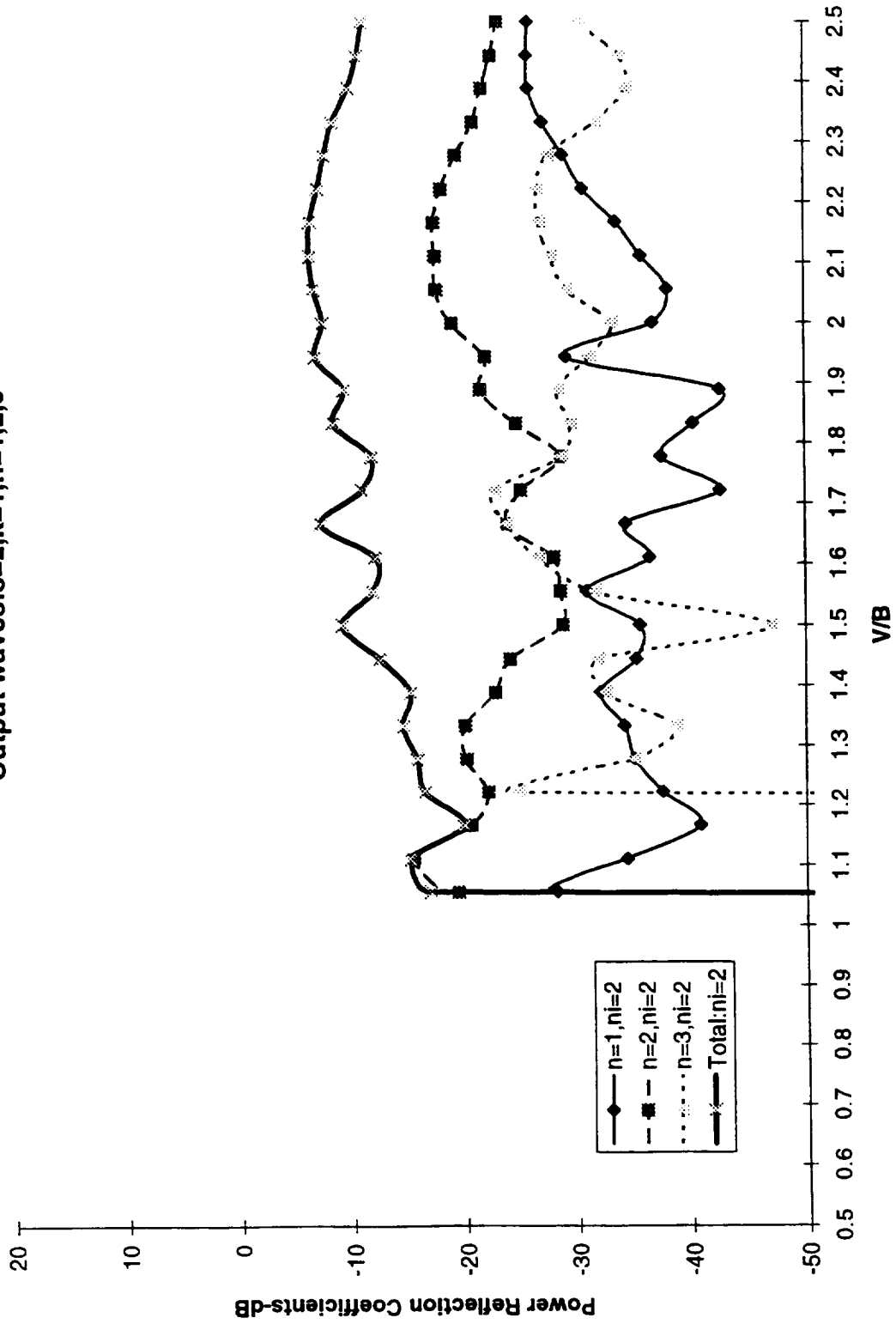
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

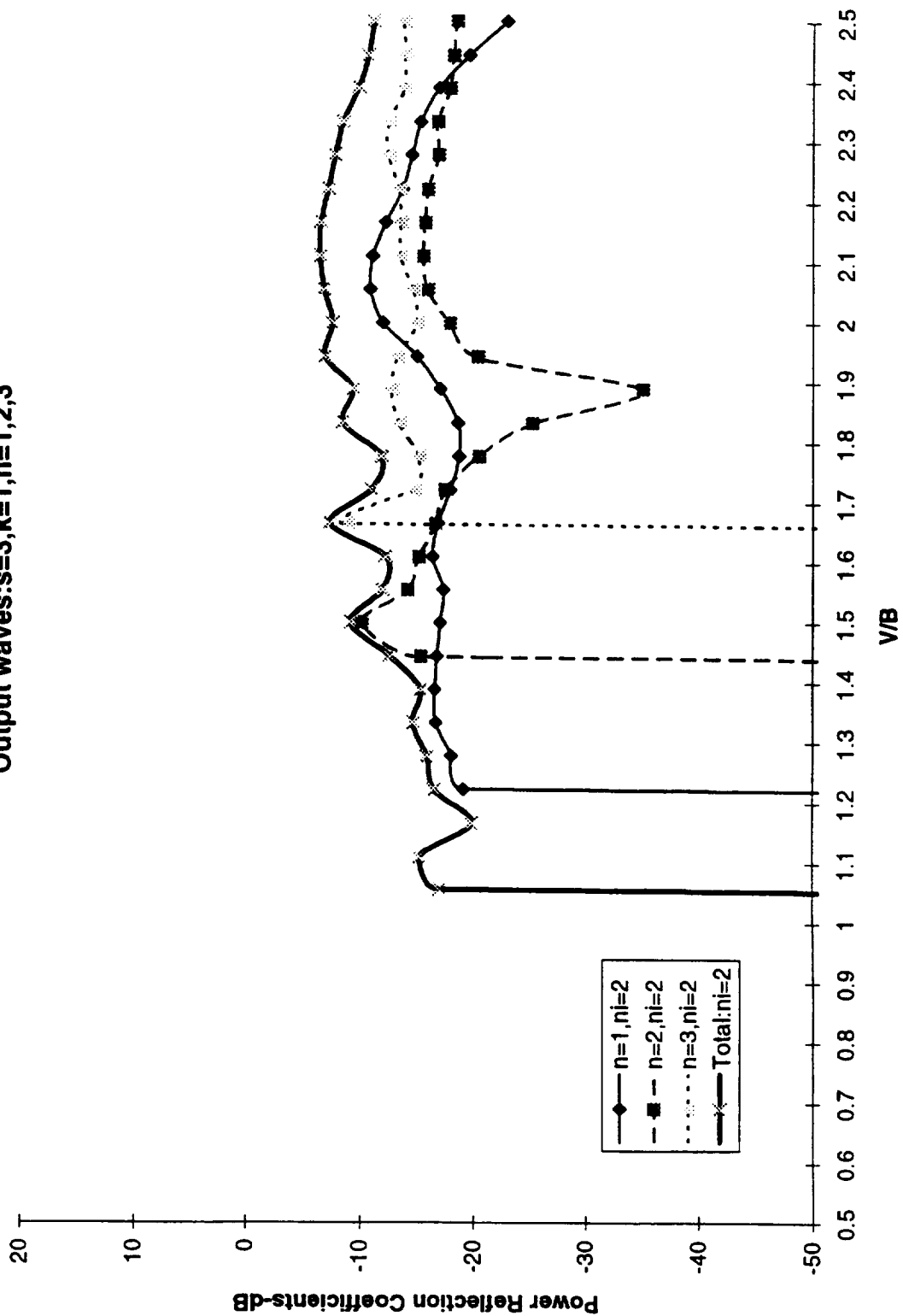
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

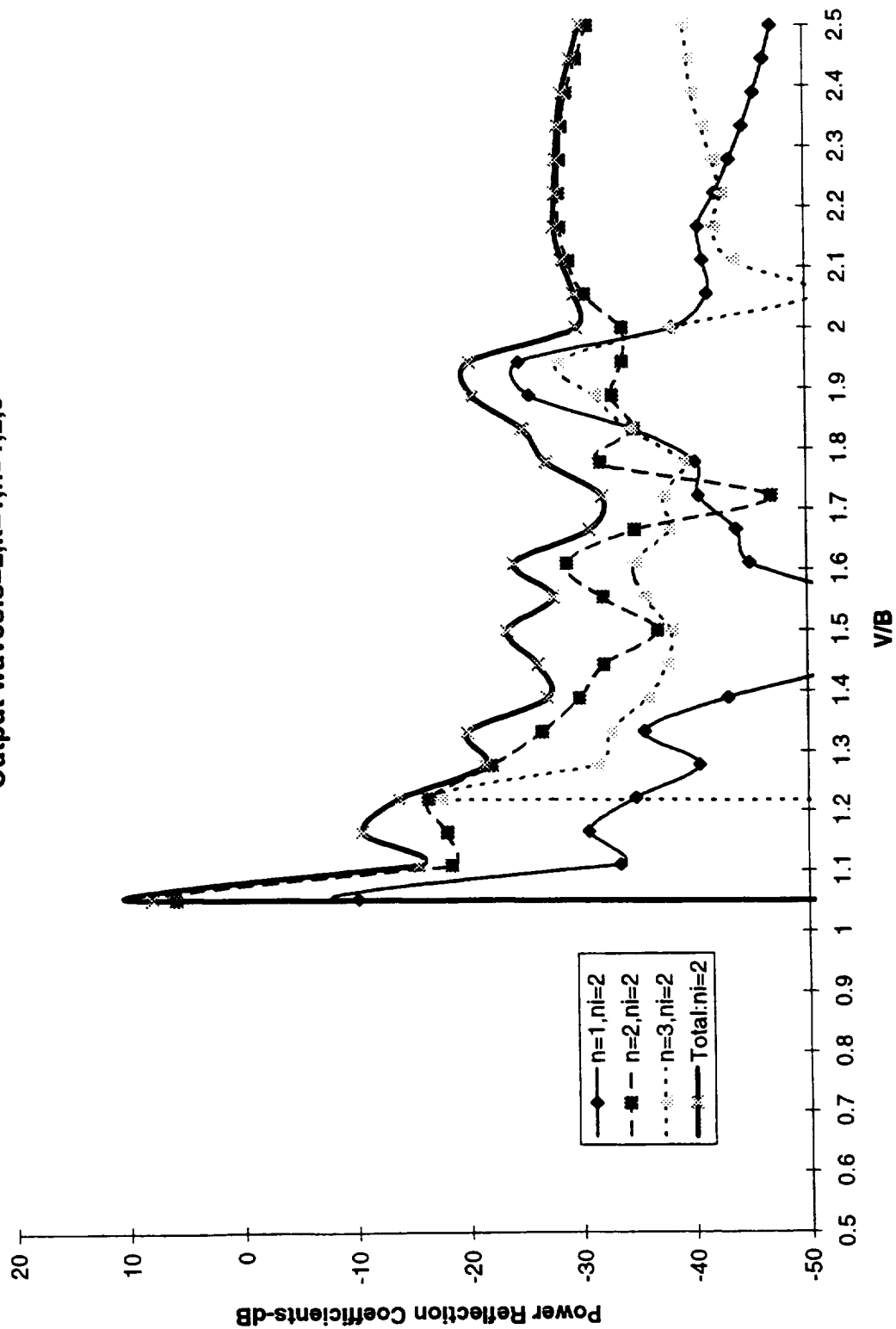
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

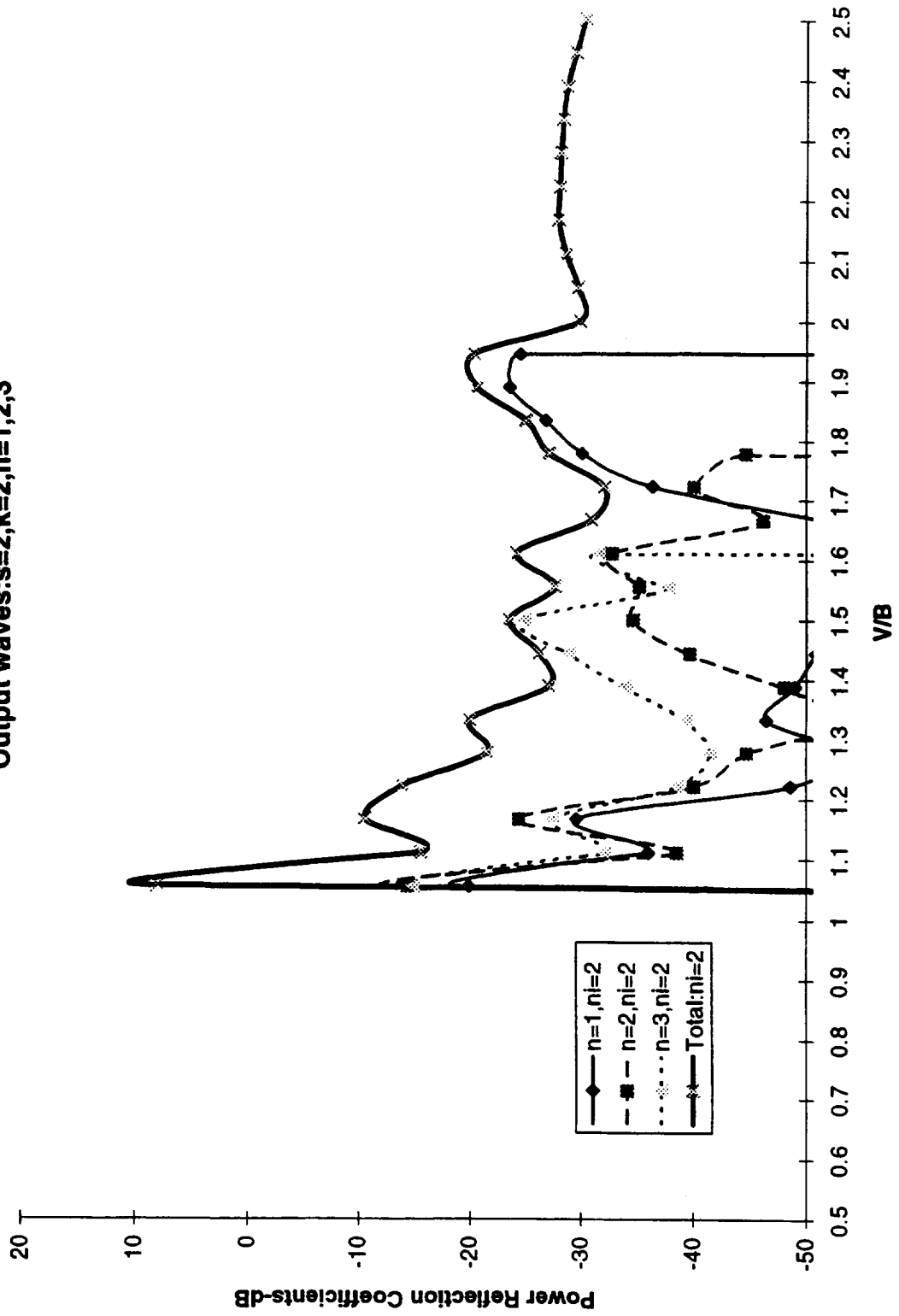
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

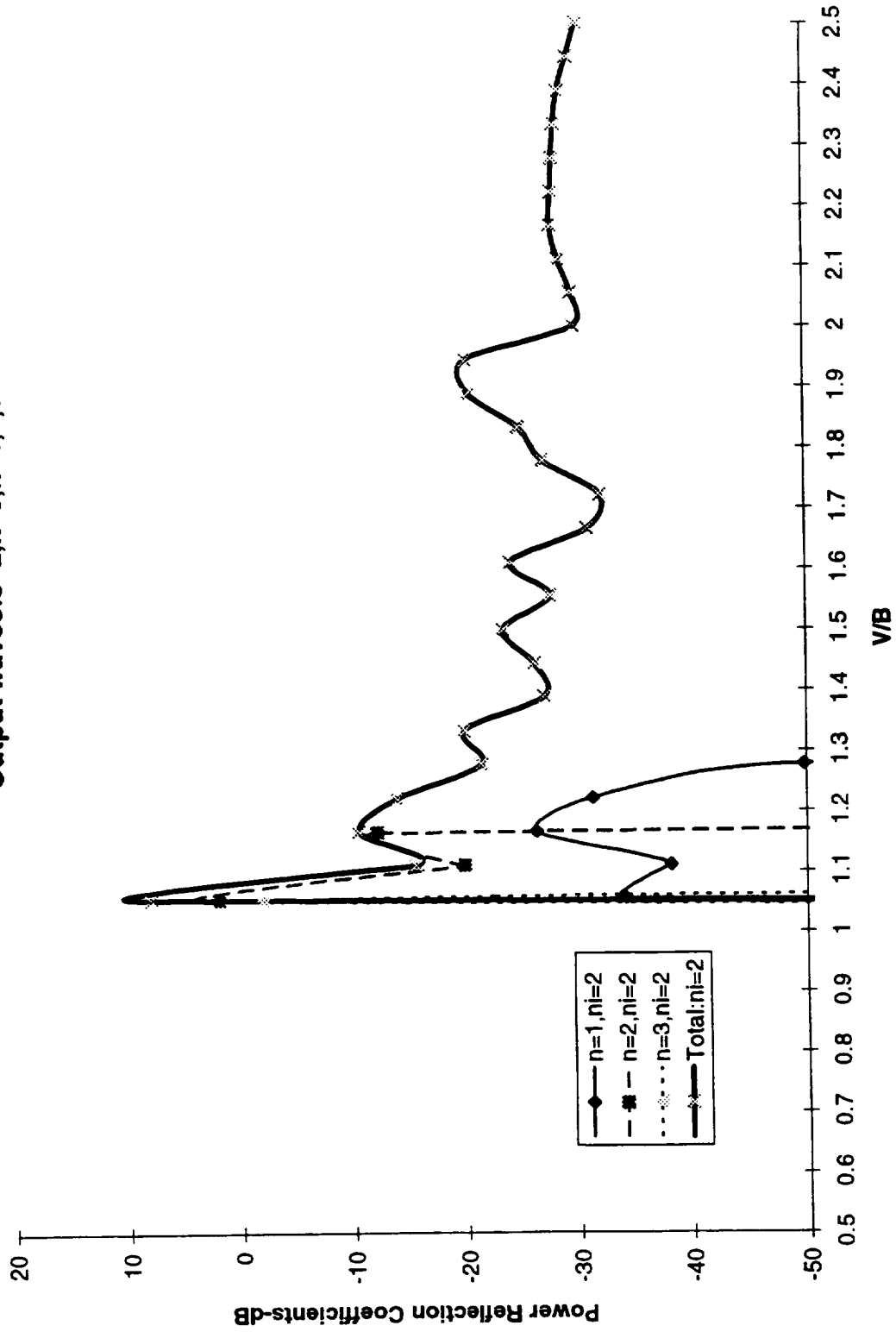
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

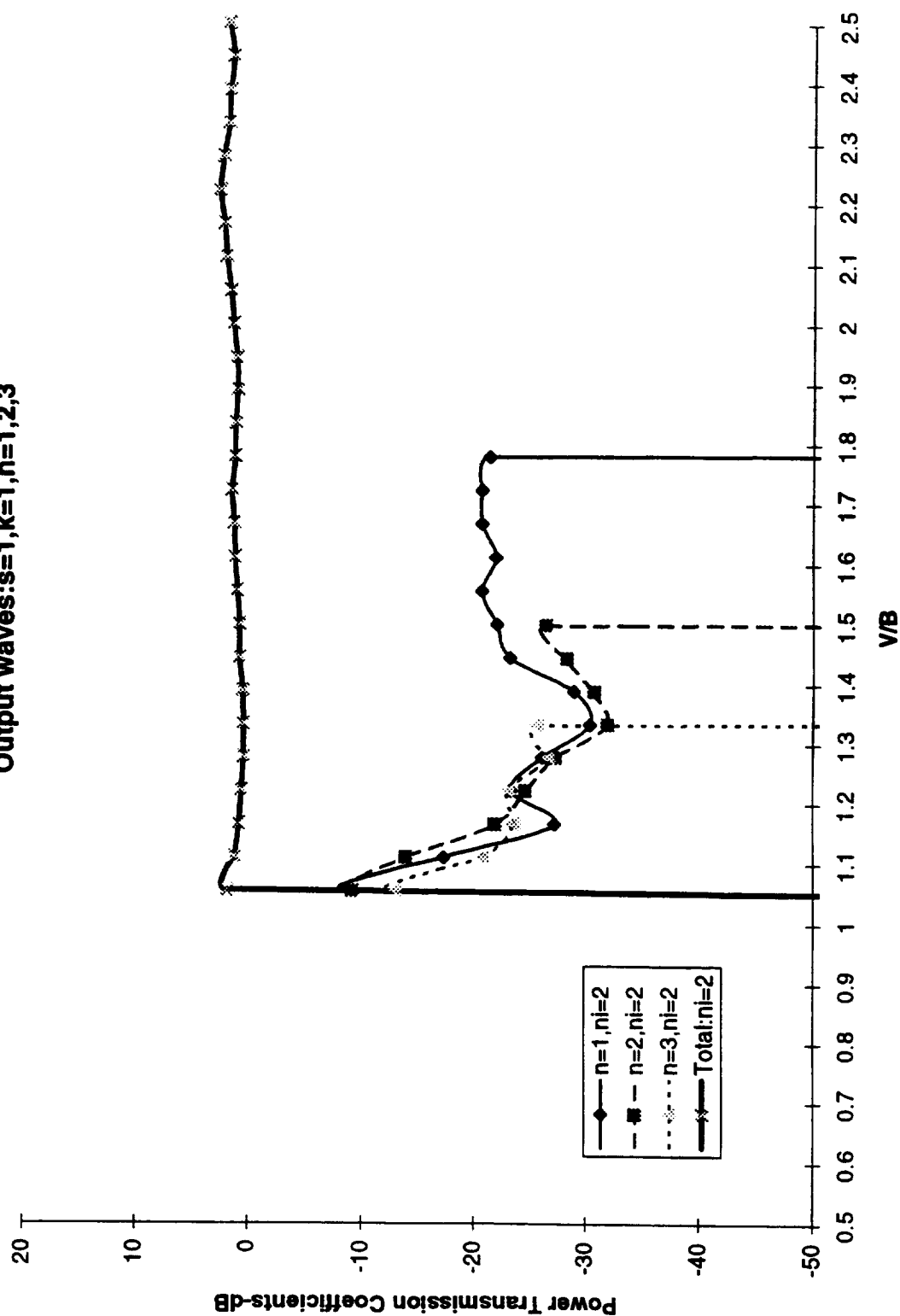
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

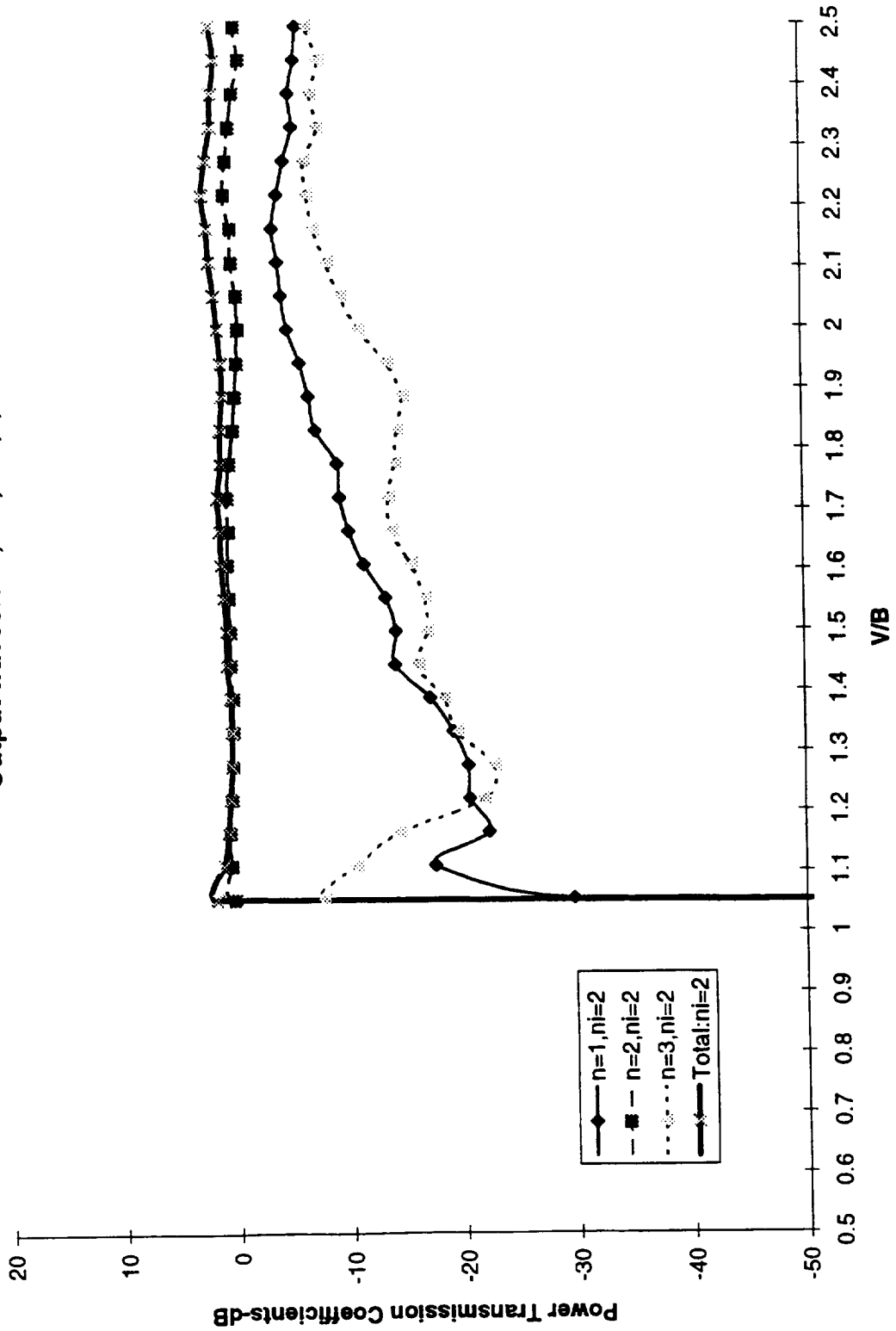
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

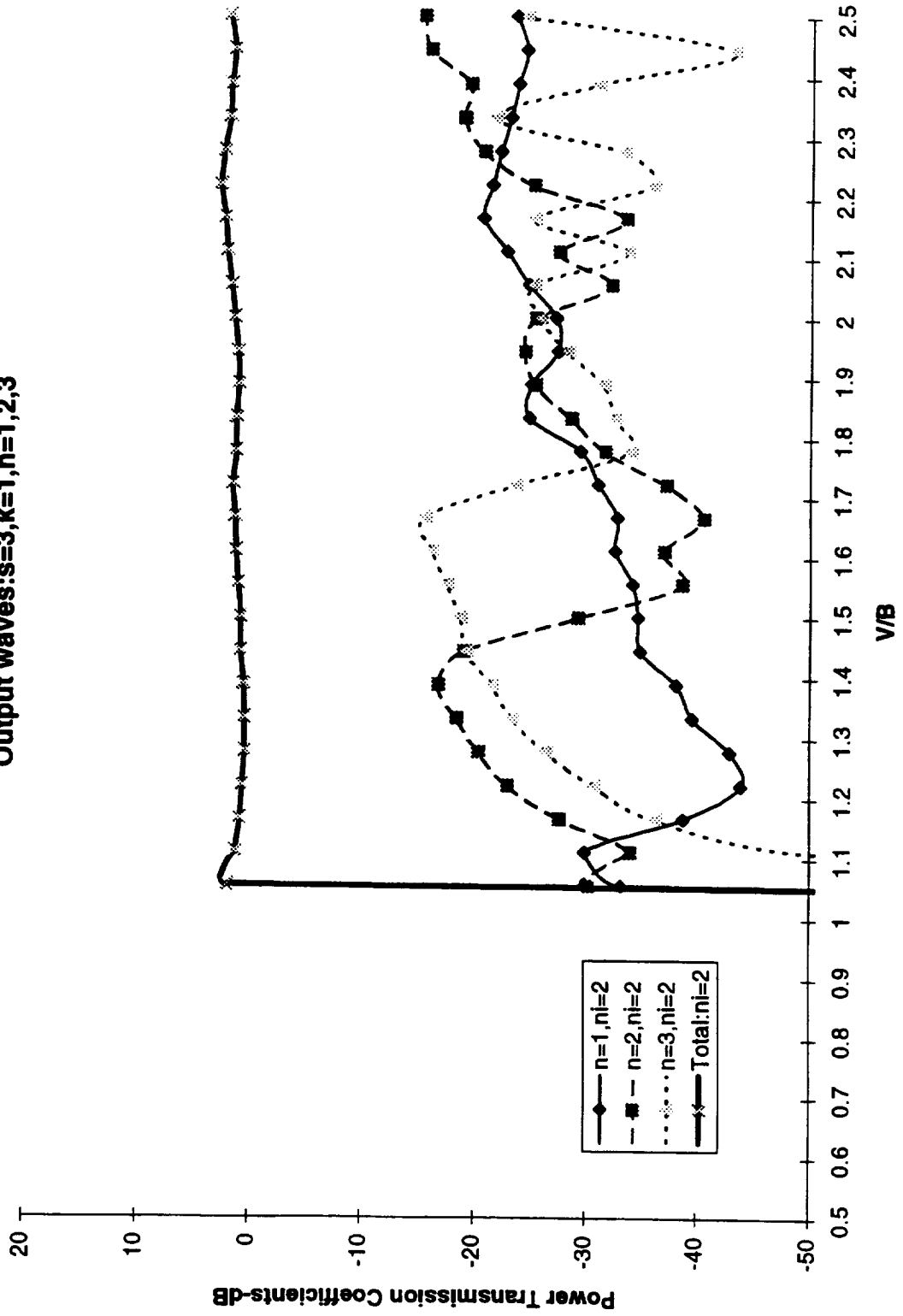
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

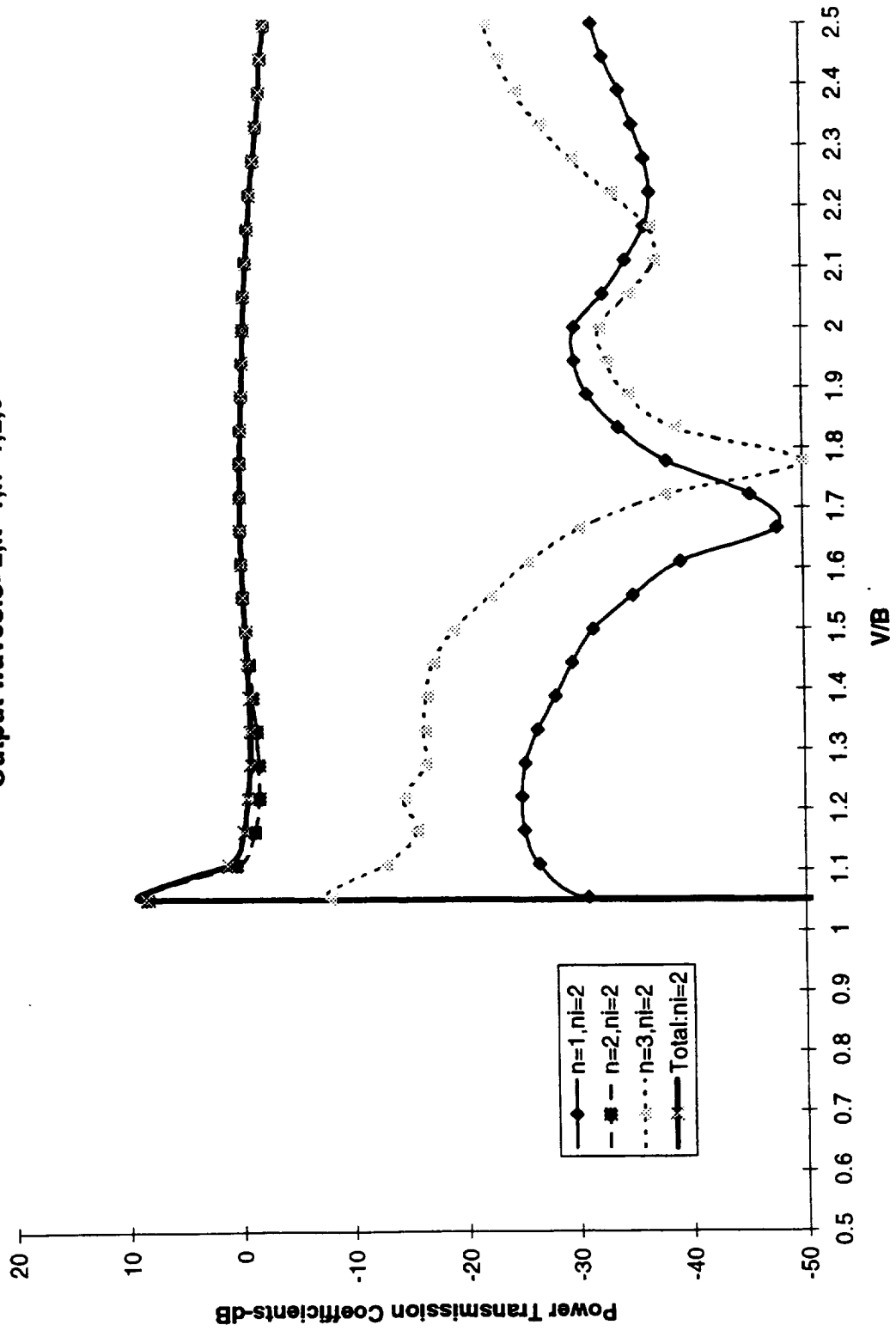
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

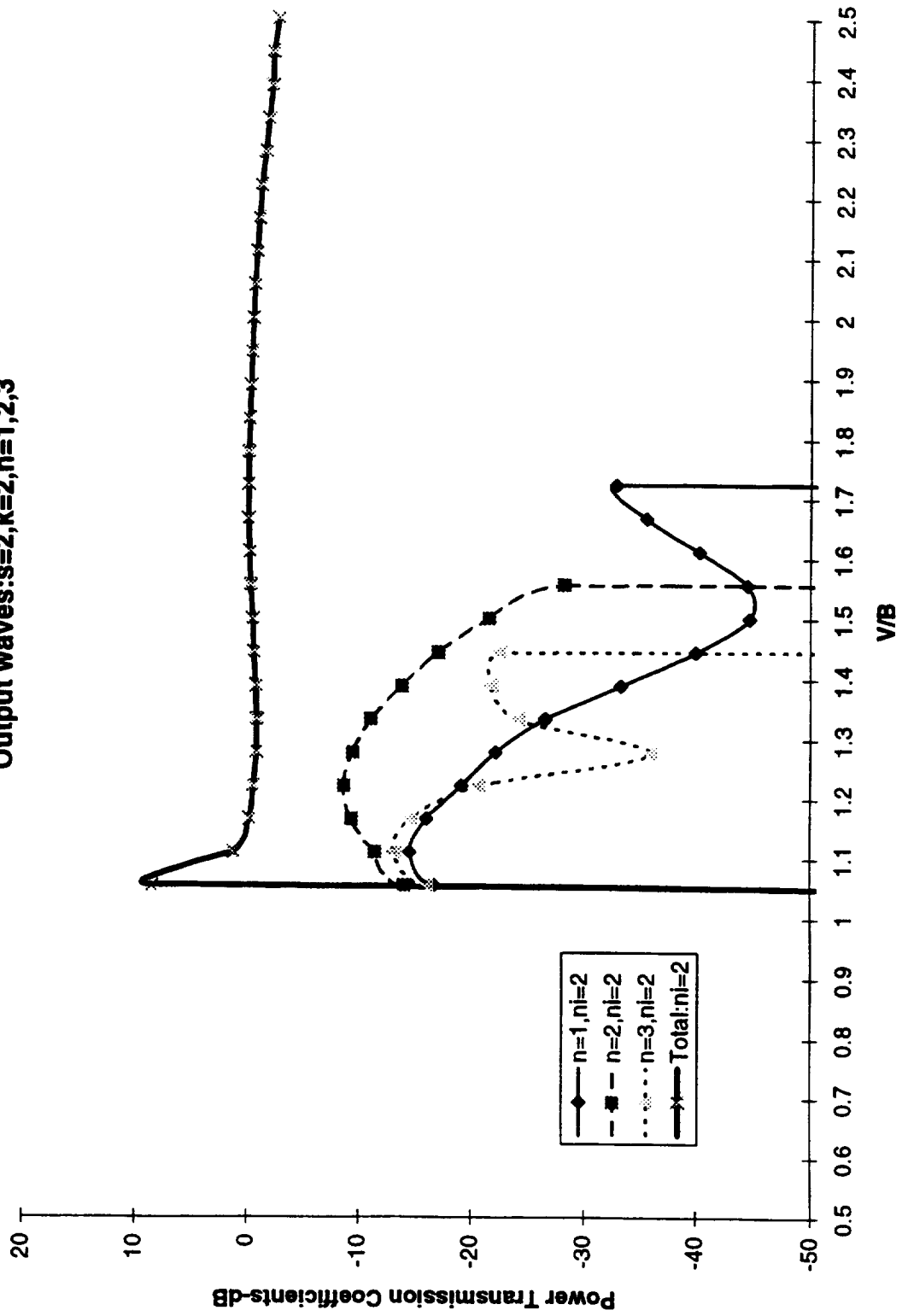
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

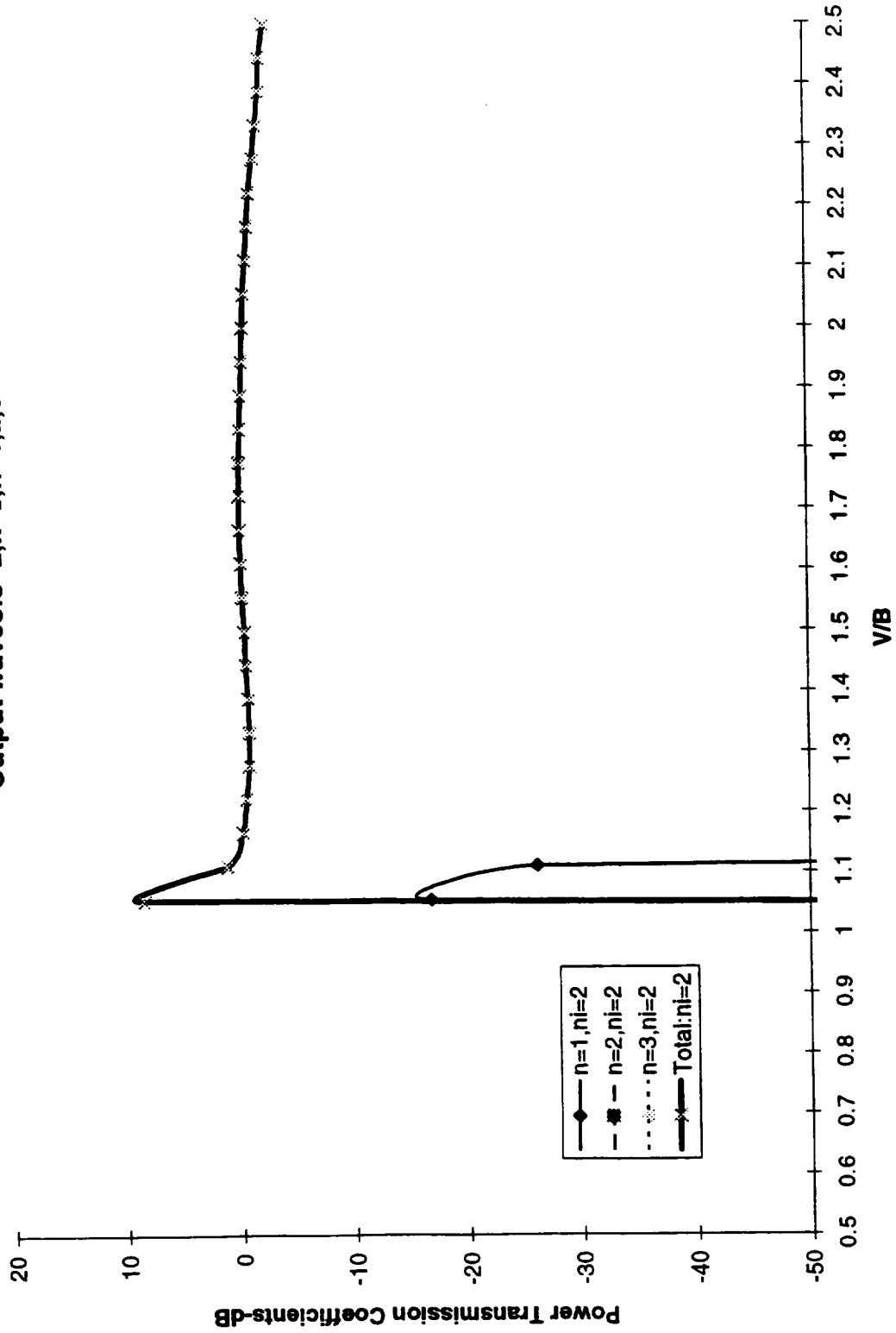
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

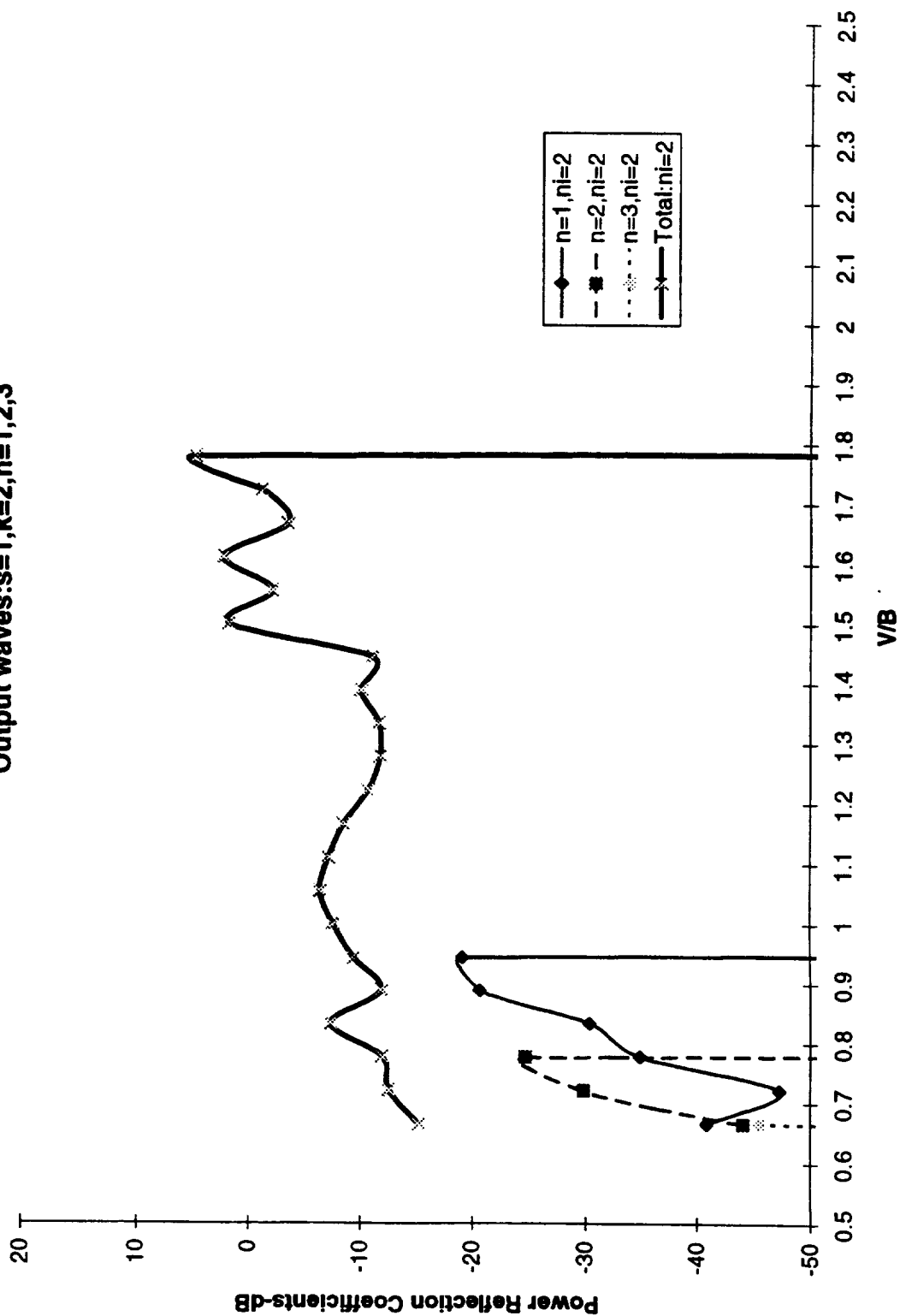
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

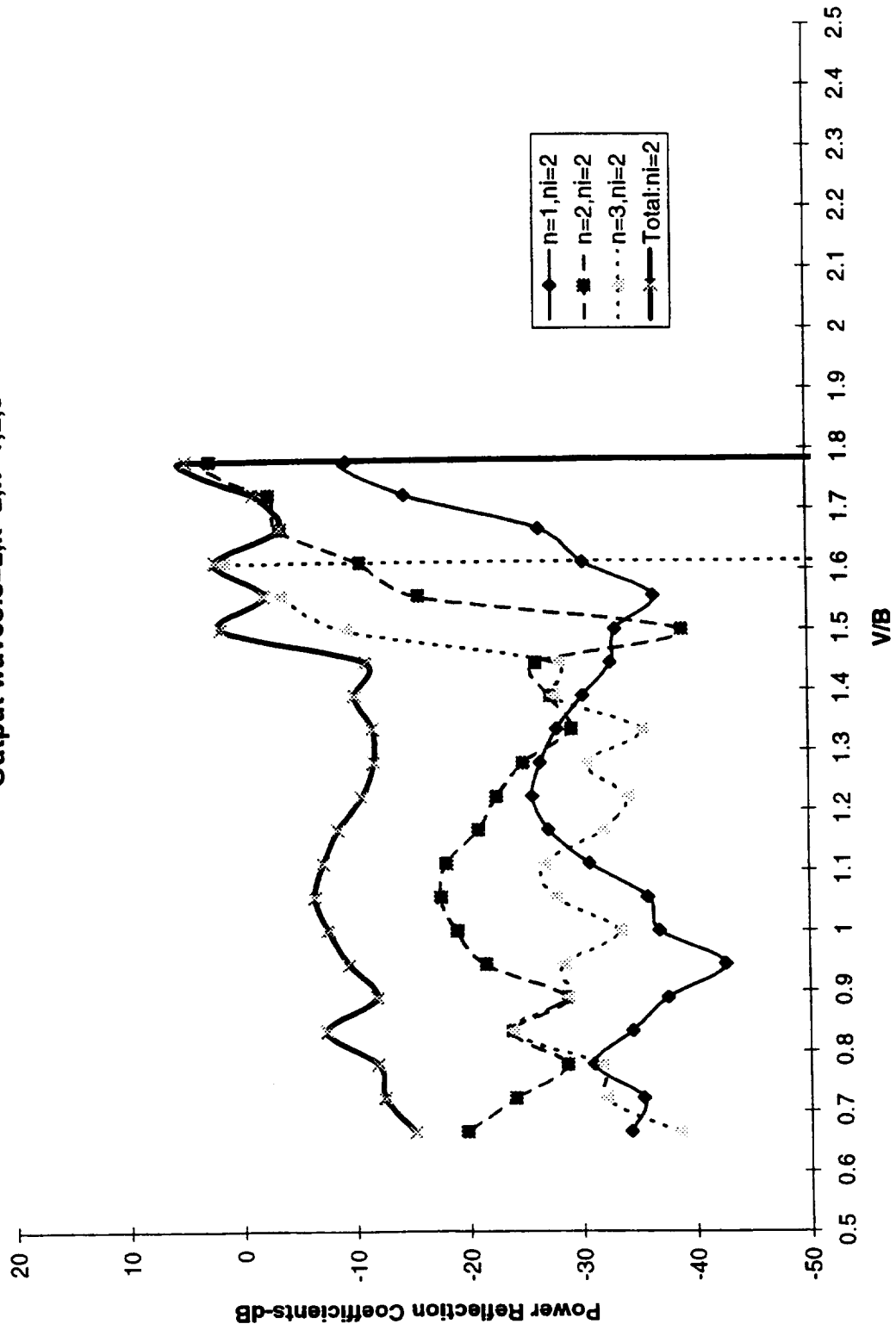
Output waves: $s=1, k=2, n=1, 2, 3$



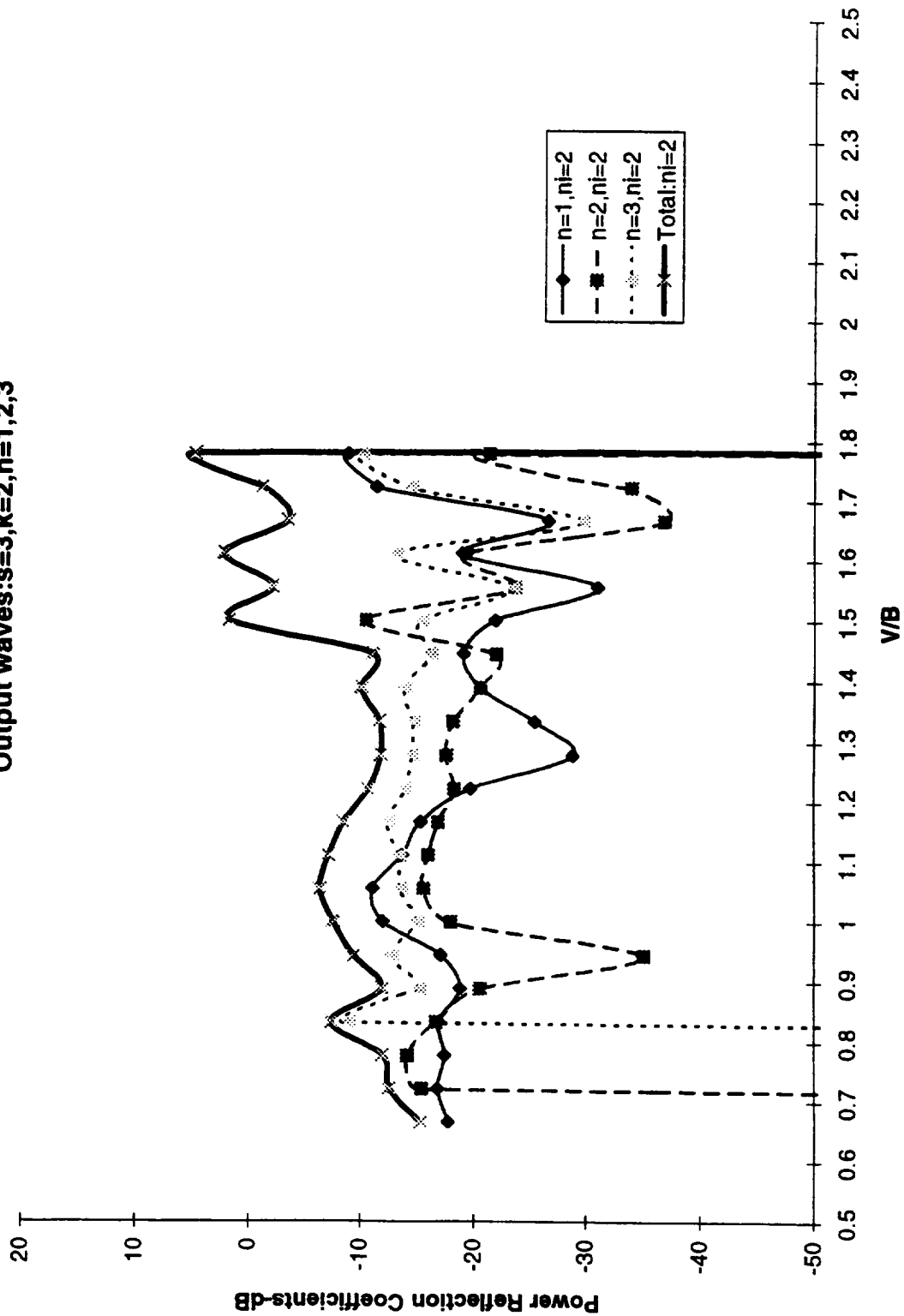
Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

Output waves: $s=2, k=2, n=1, 2, 3$



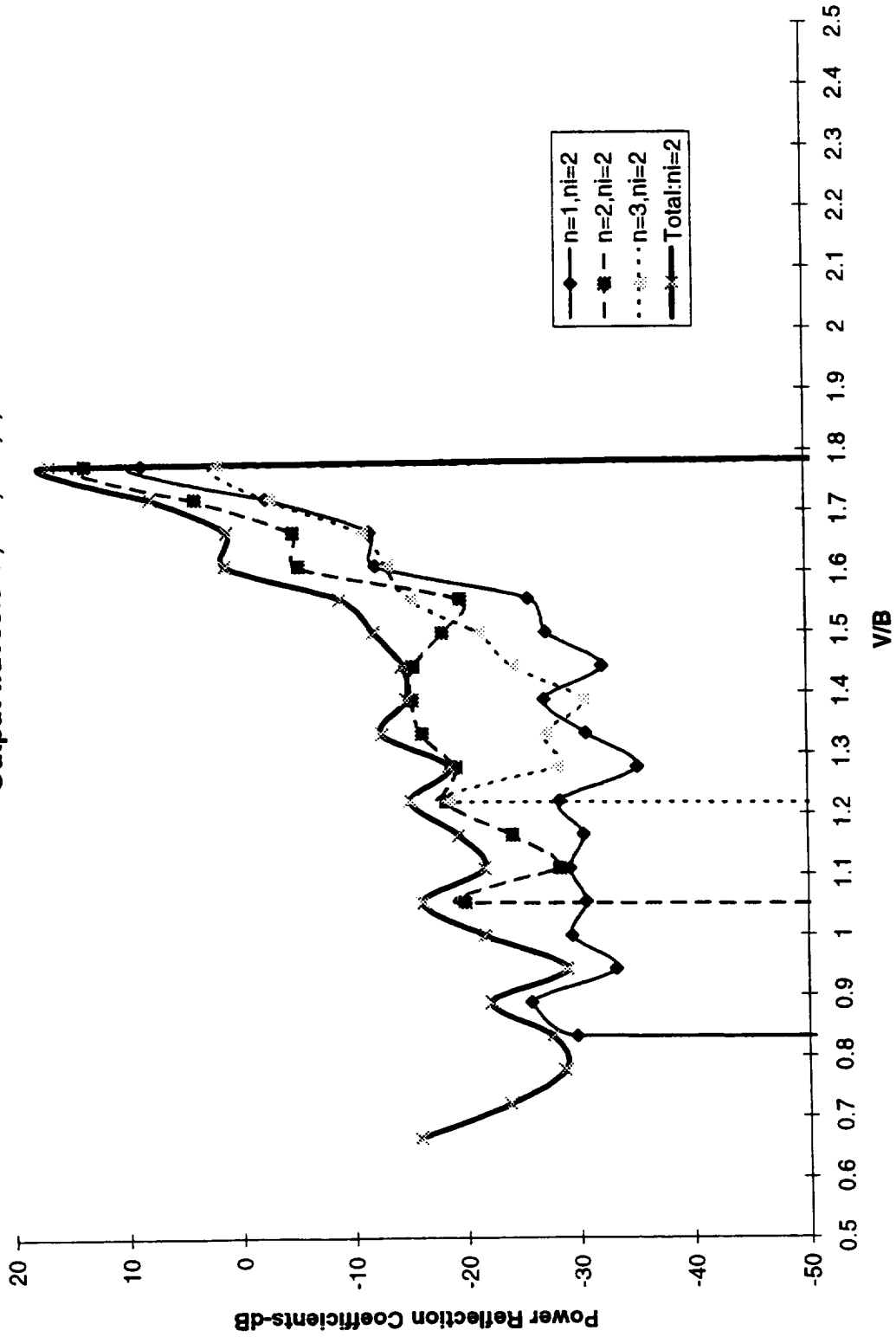
Rotor Reflection-High Speed Case
Input wave: $s_i=2, k_i=2, n_i=2$
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

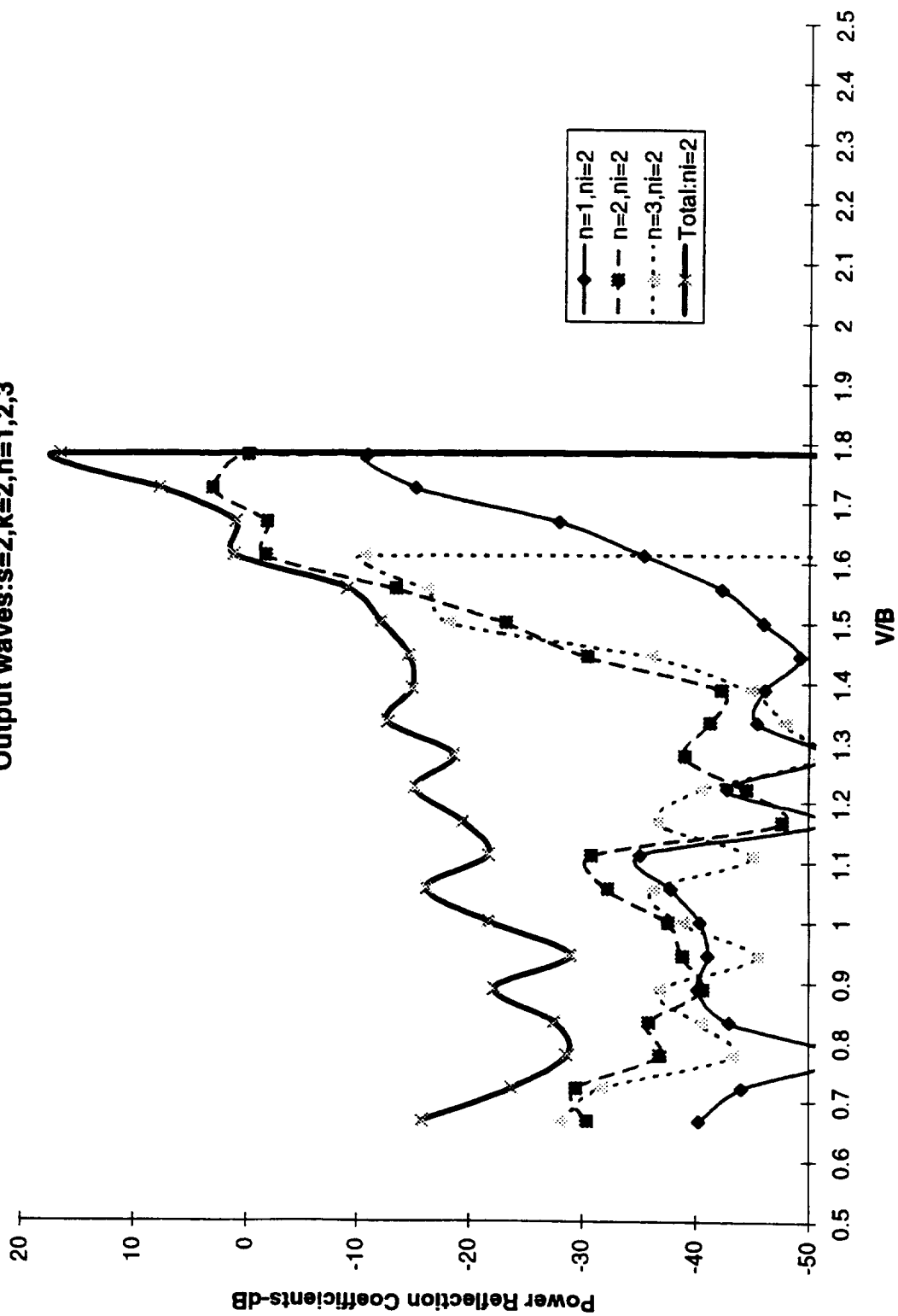
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

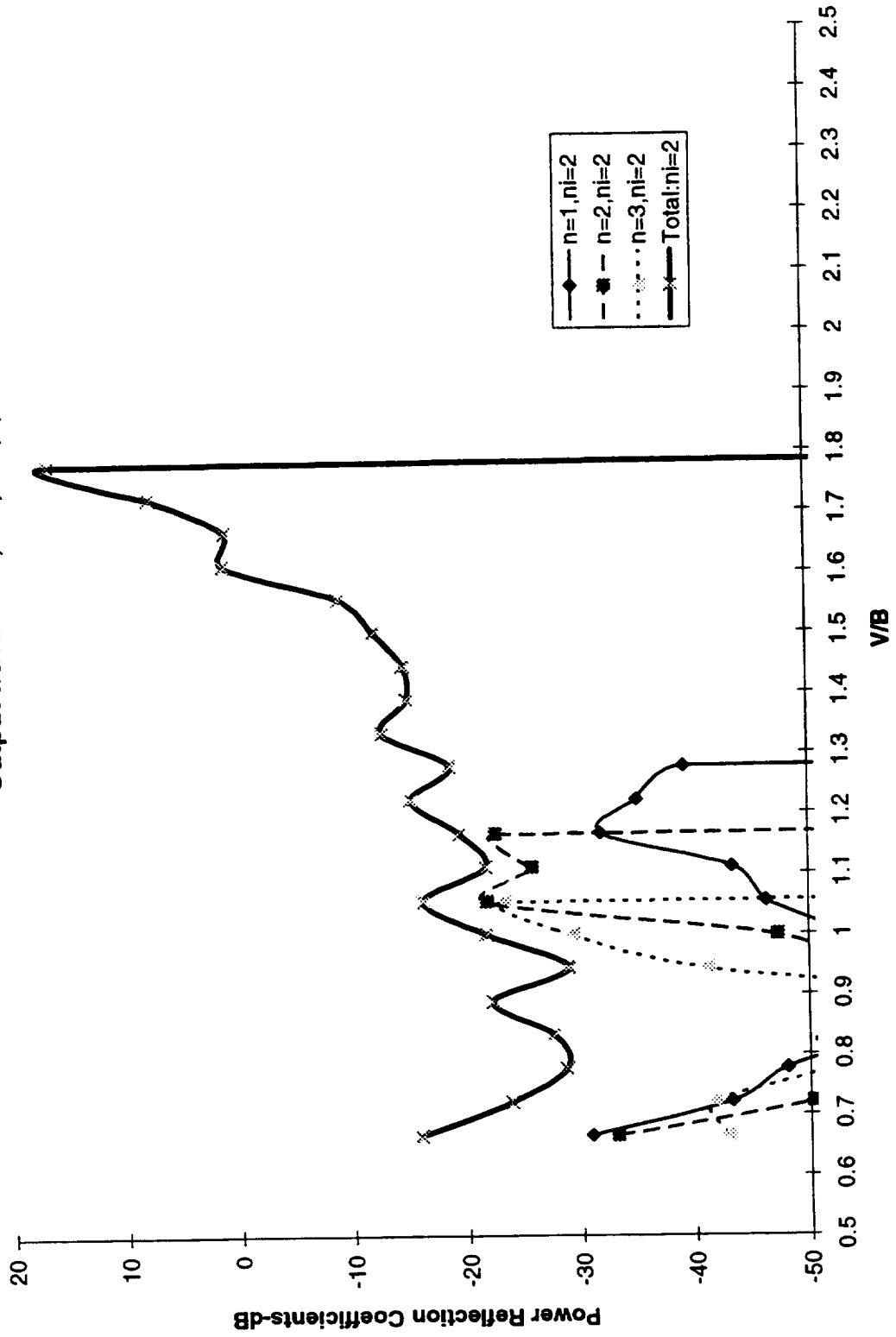
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

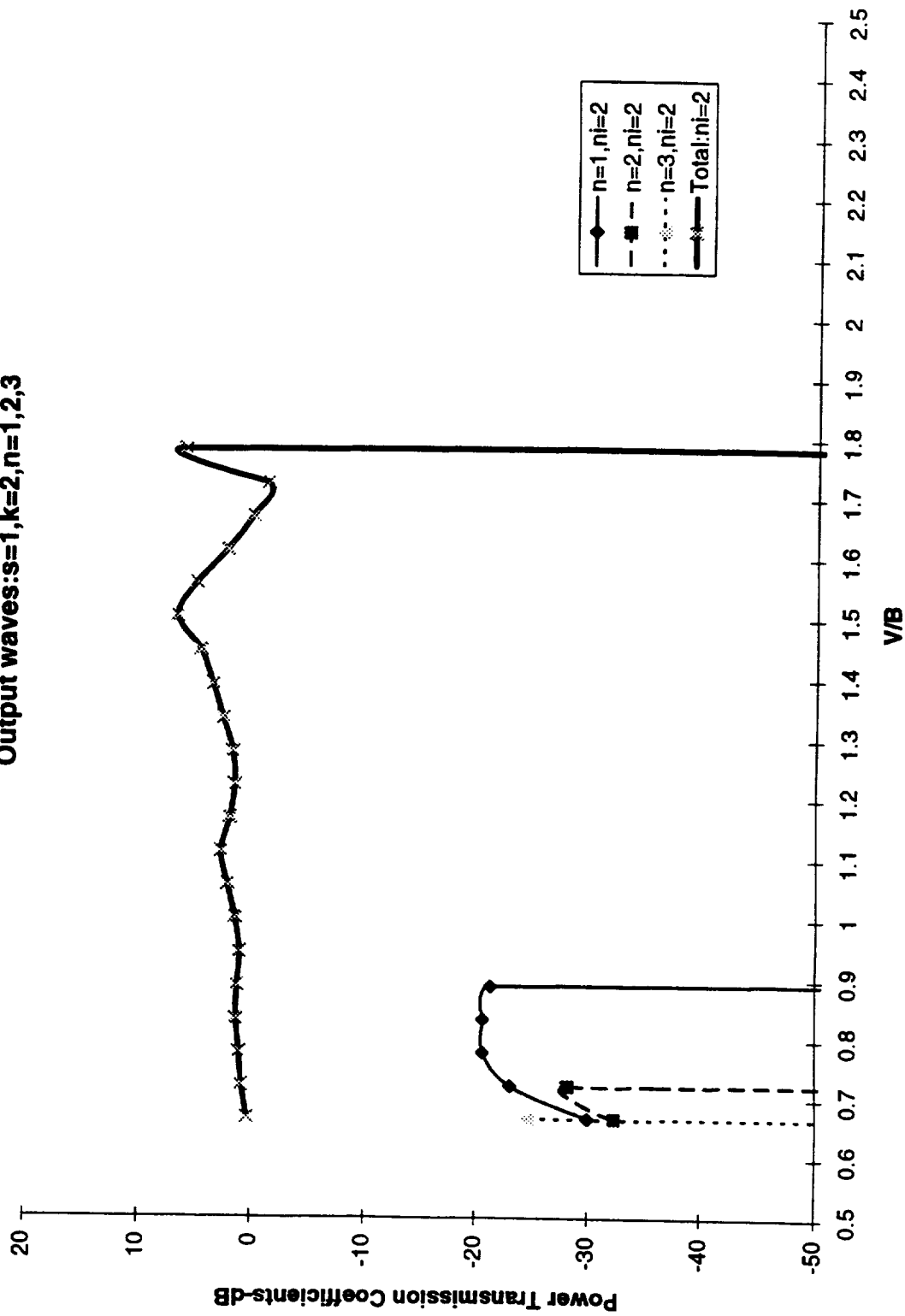
Output wave: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

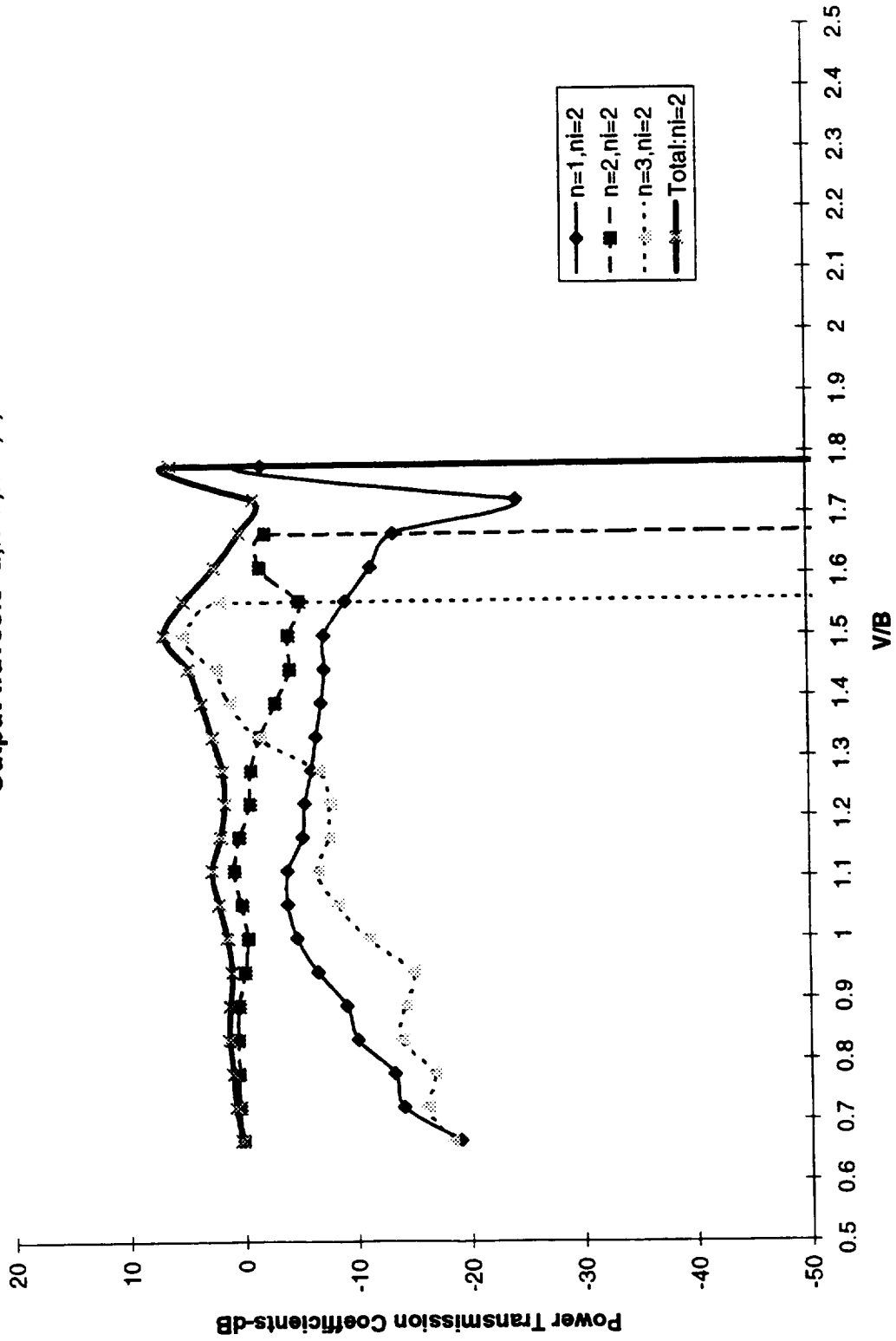
Output waves: $s=1, k=2, n=1, 2, 3$



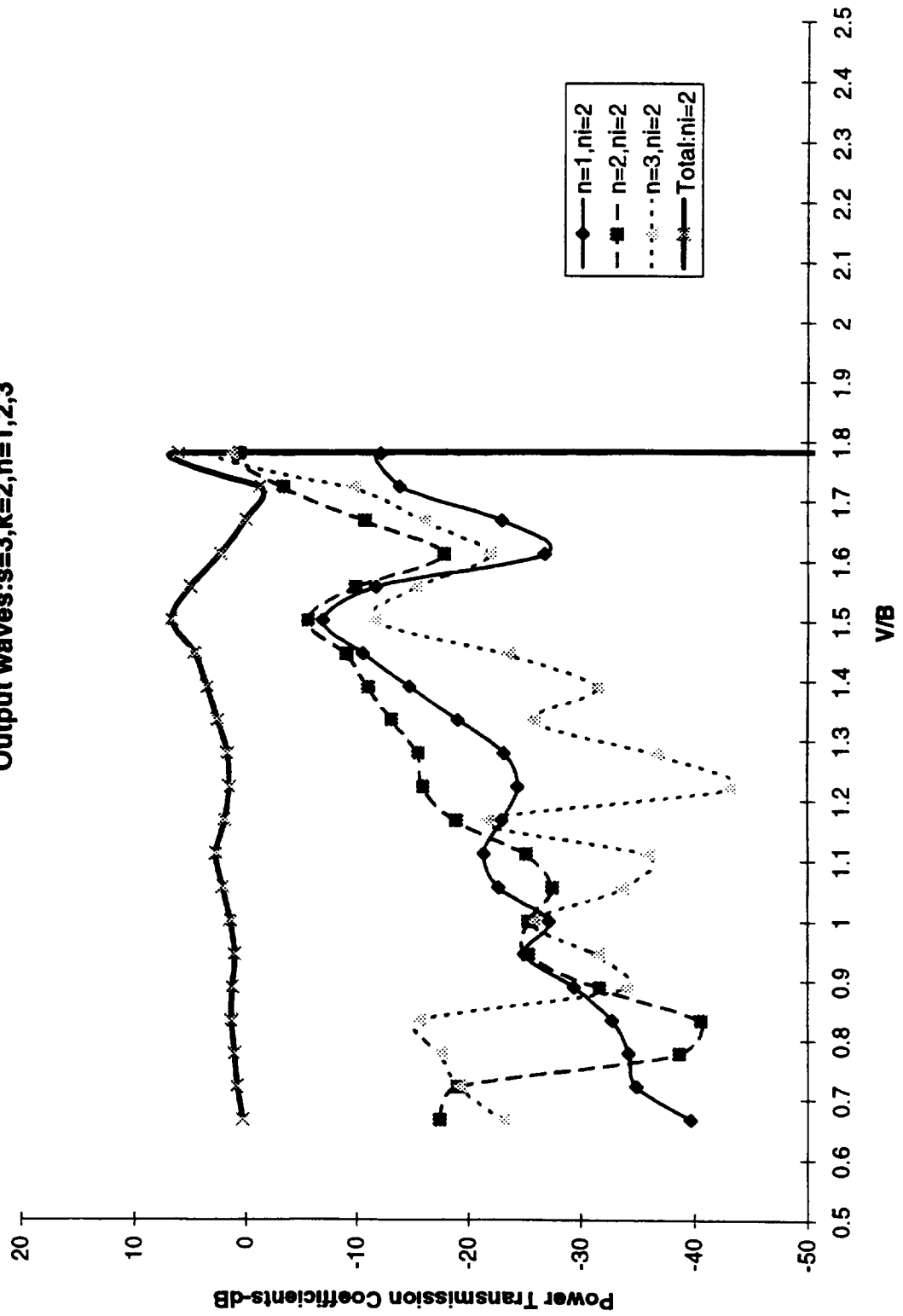
Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

Output waves: $s=2, k=2, n=1, 2, 3$



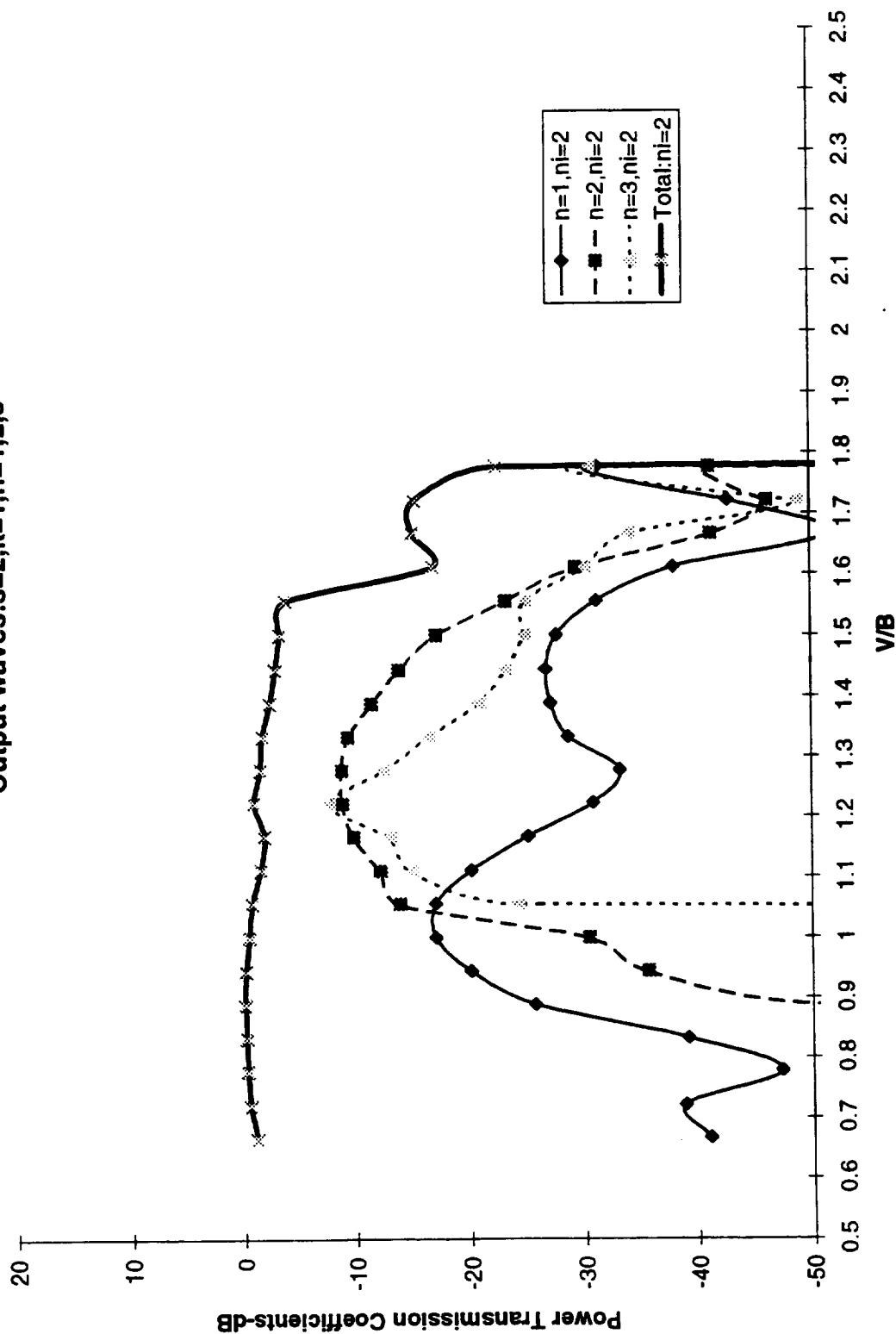
Rotor Transmission-High Speed Case
Input wave: $s_l=2, k_l=2, n_l=2$
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

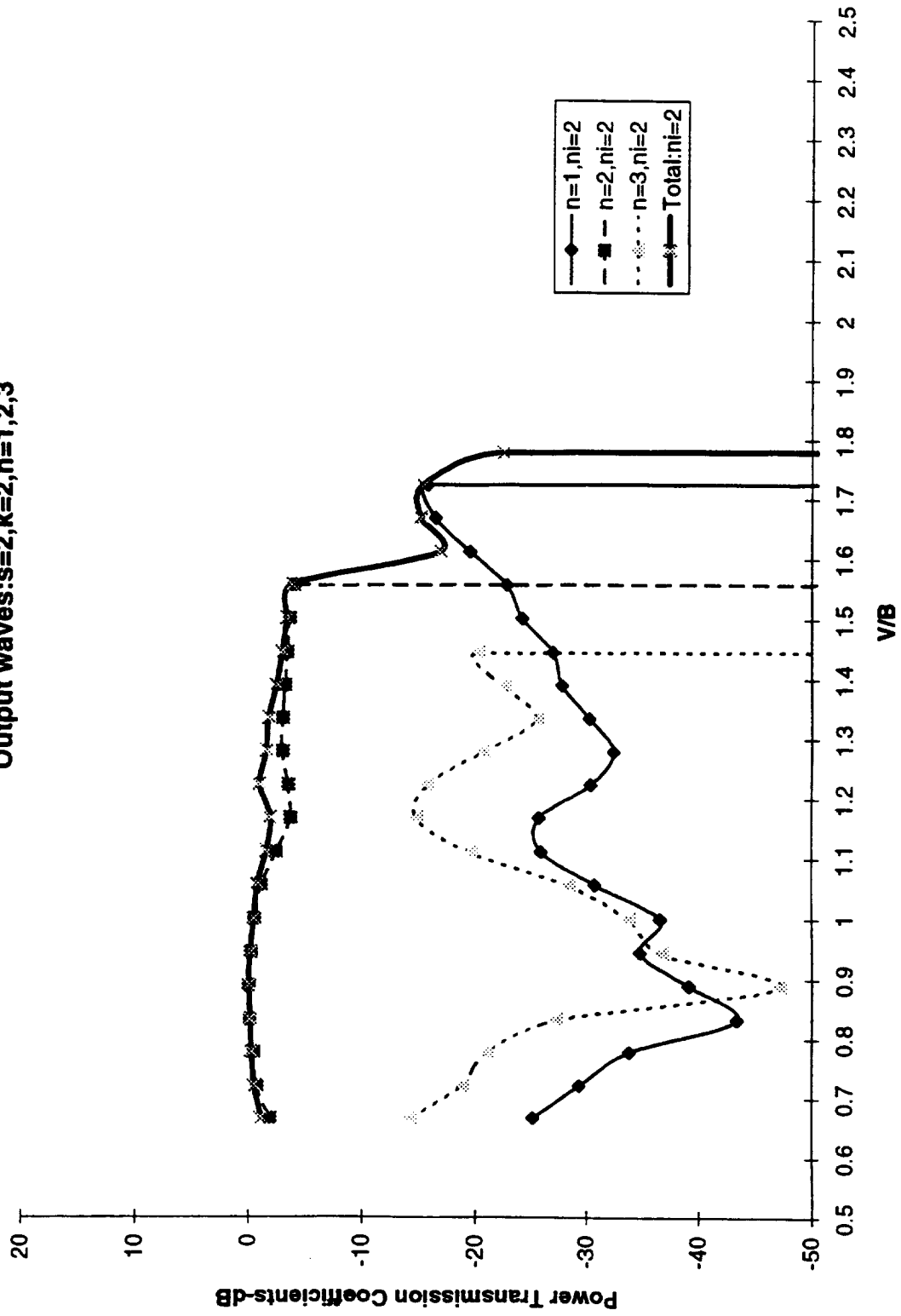
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

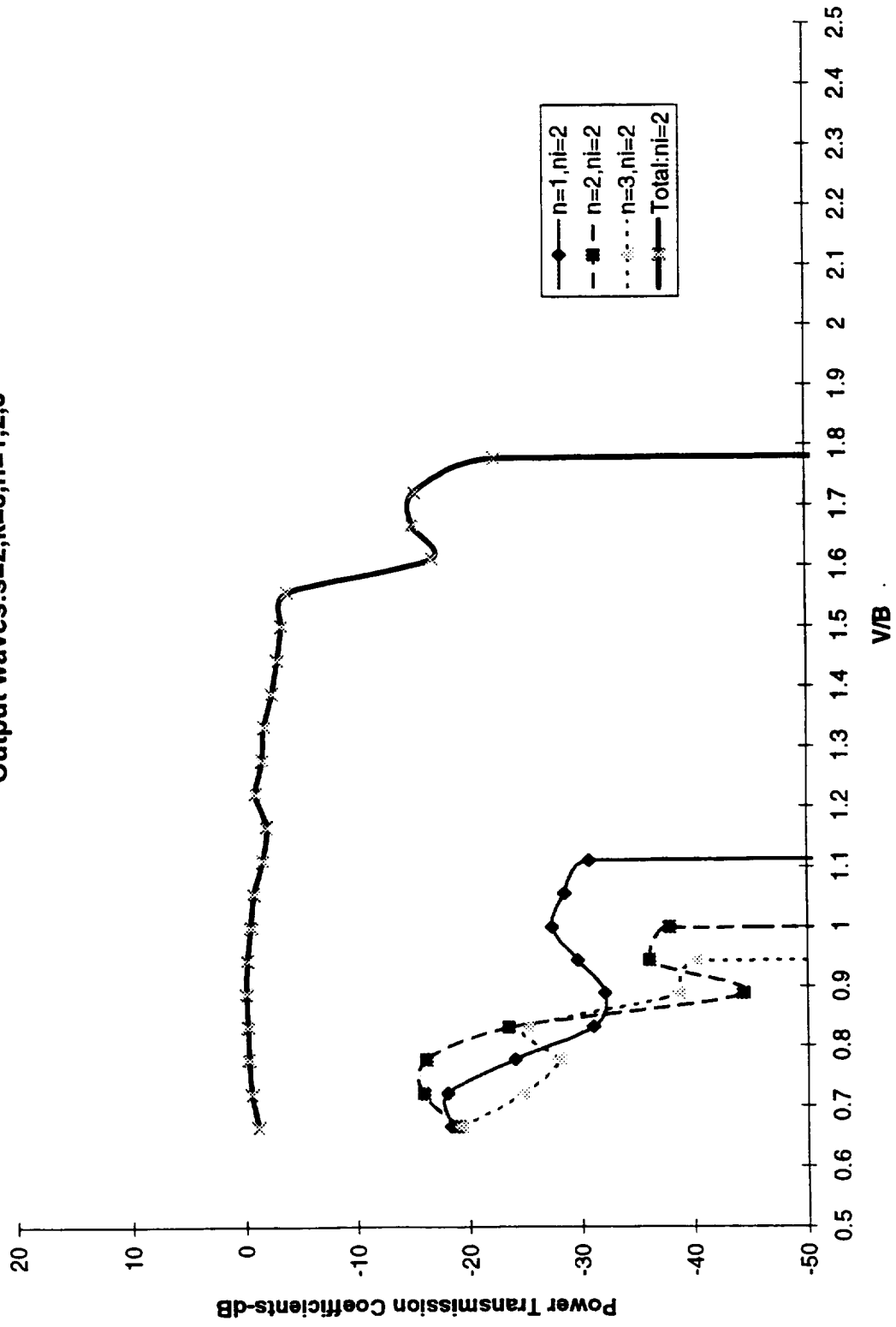
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

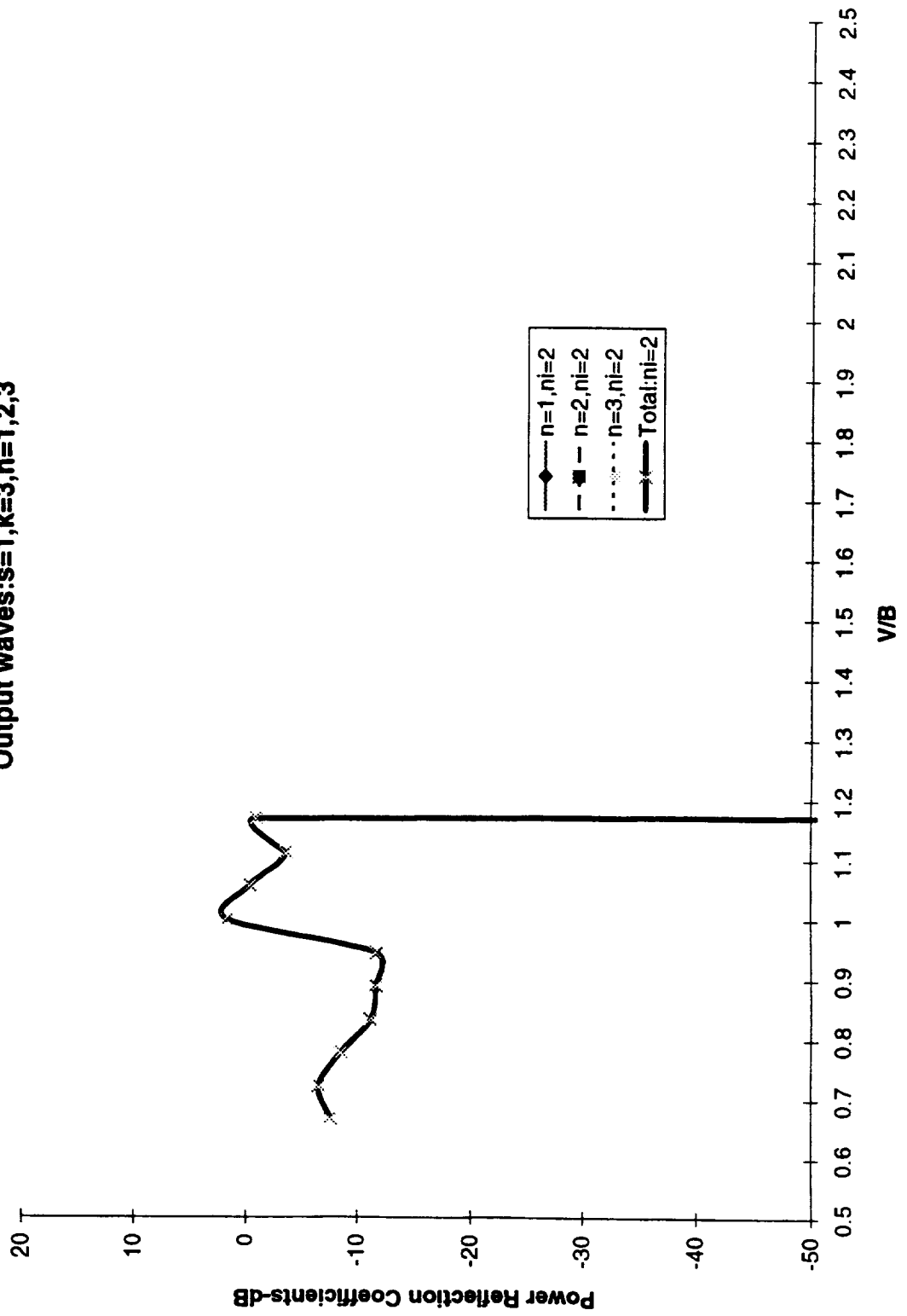
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

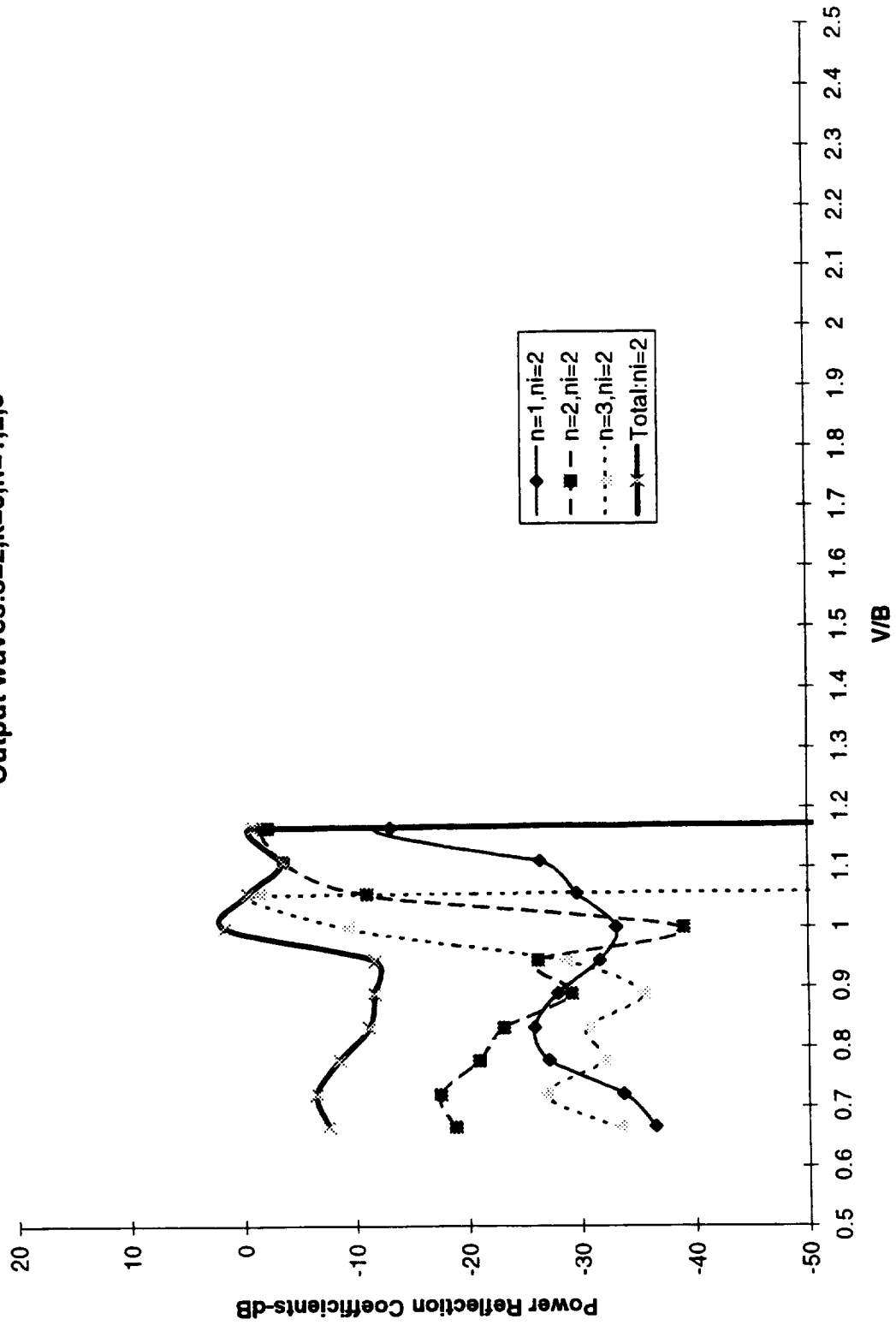
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

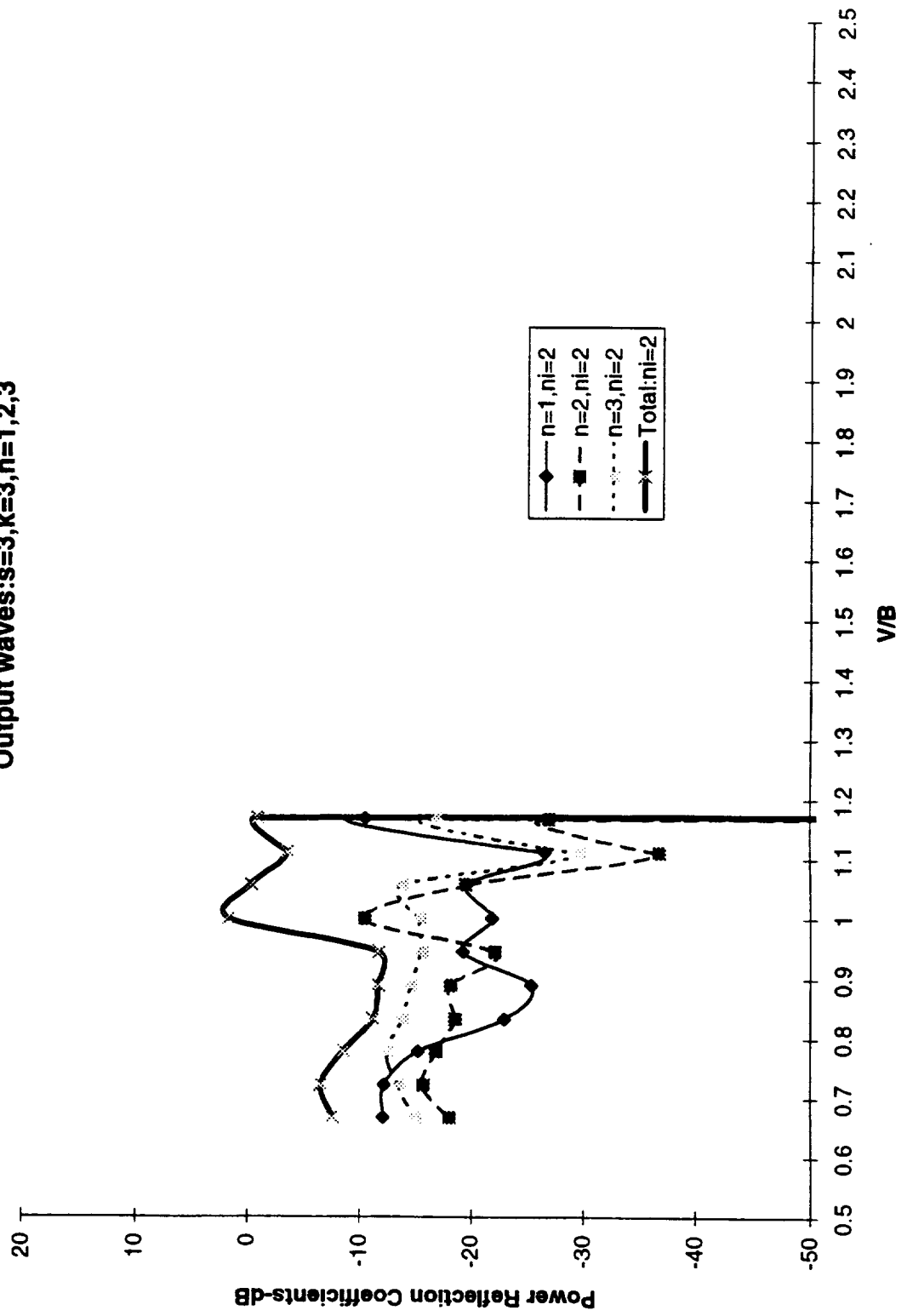
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

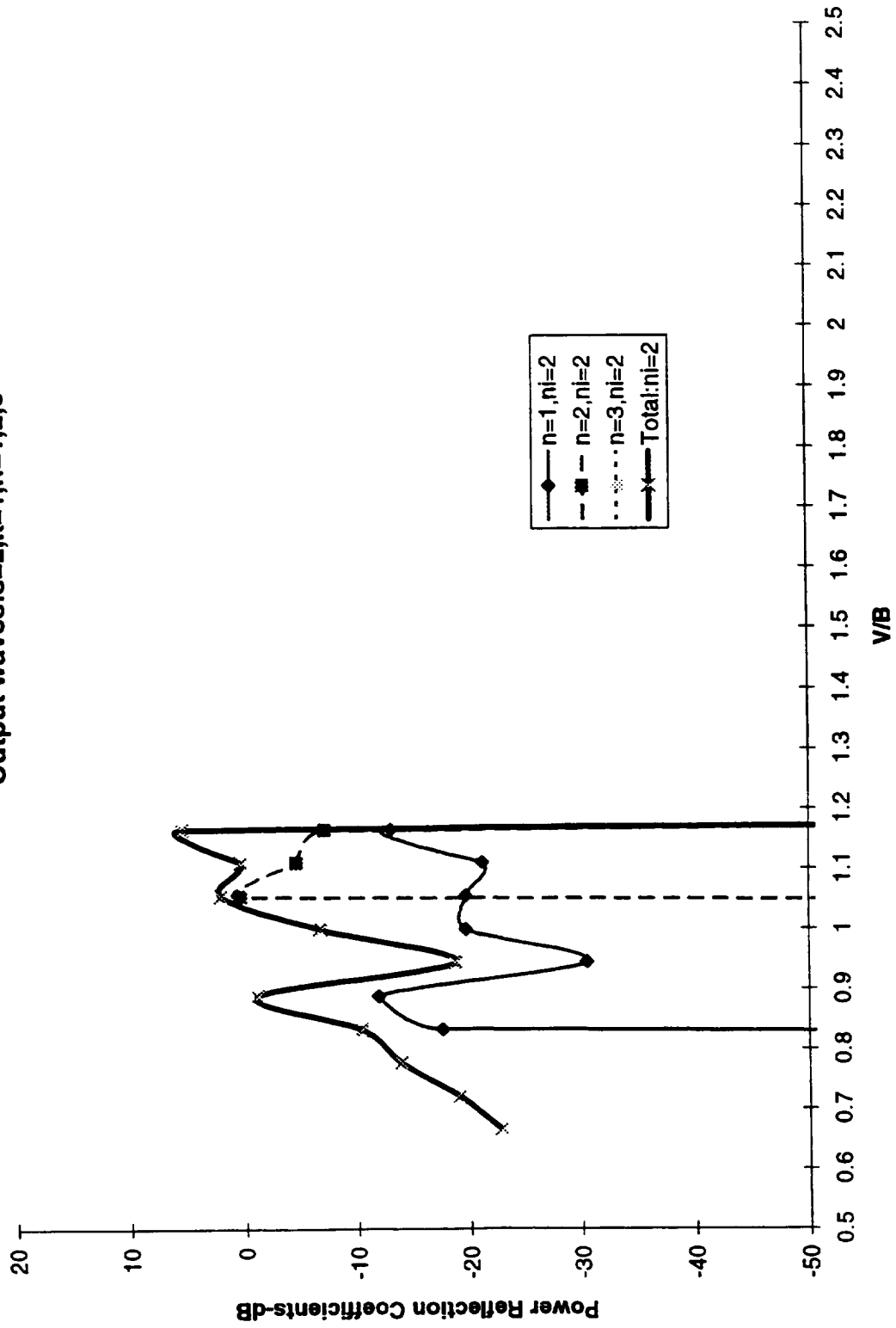
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $sl=2, kl=3, nl=2$

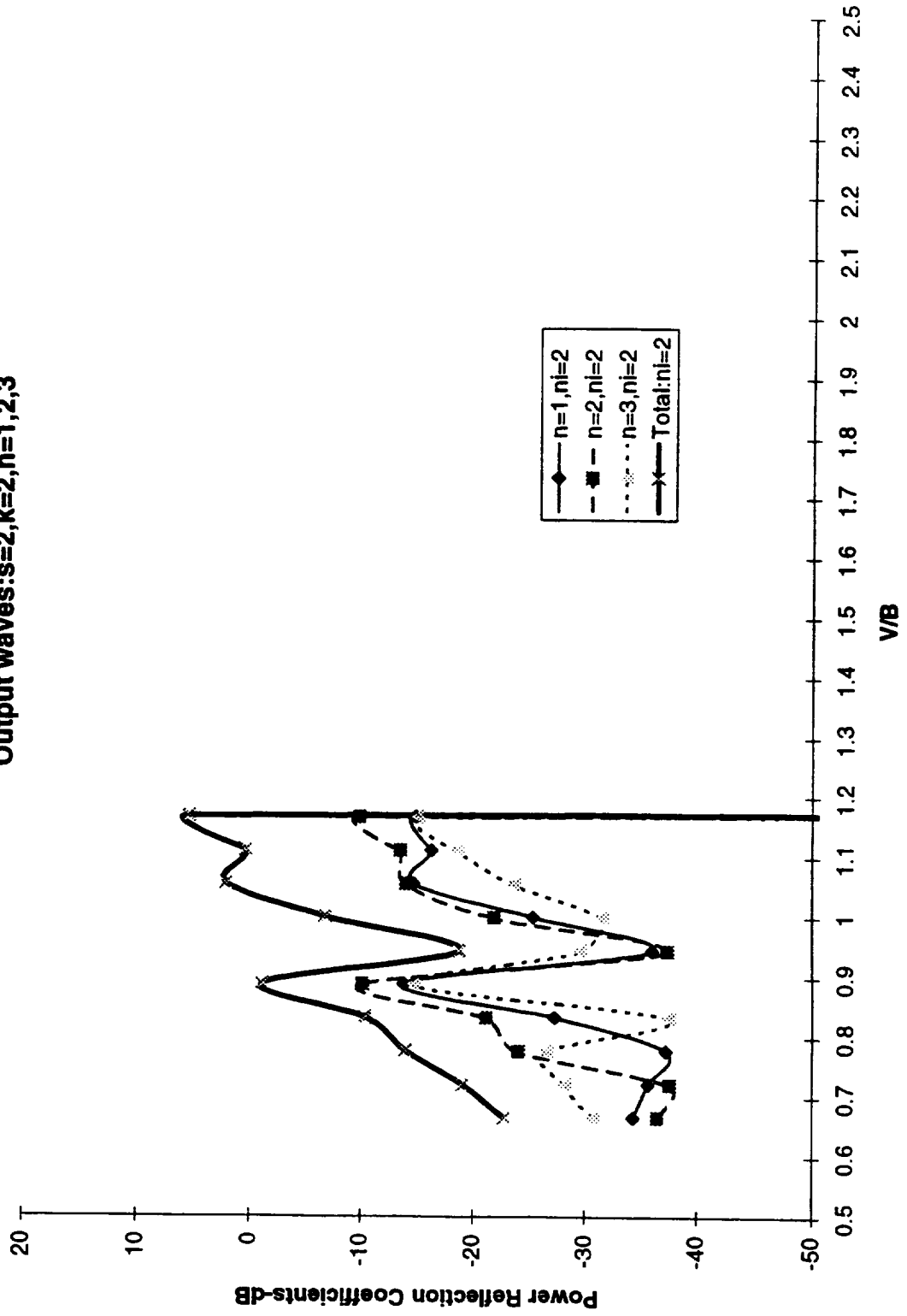
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

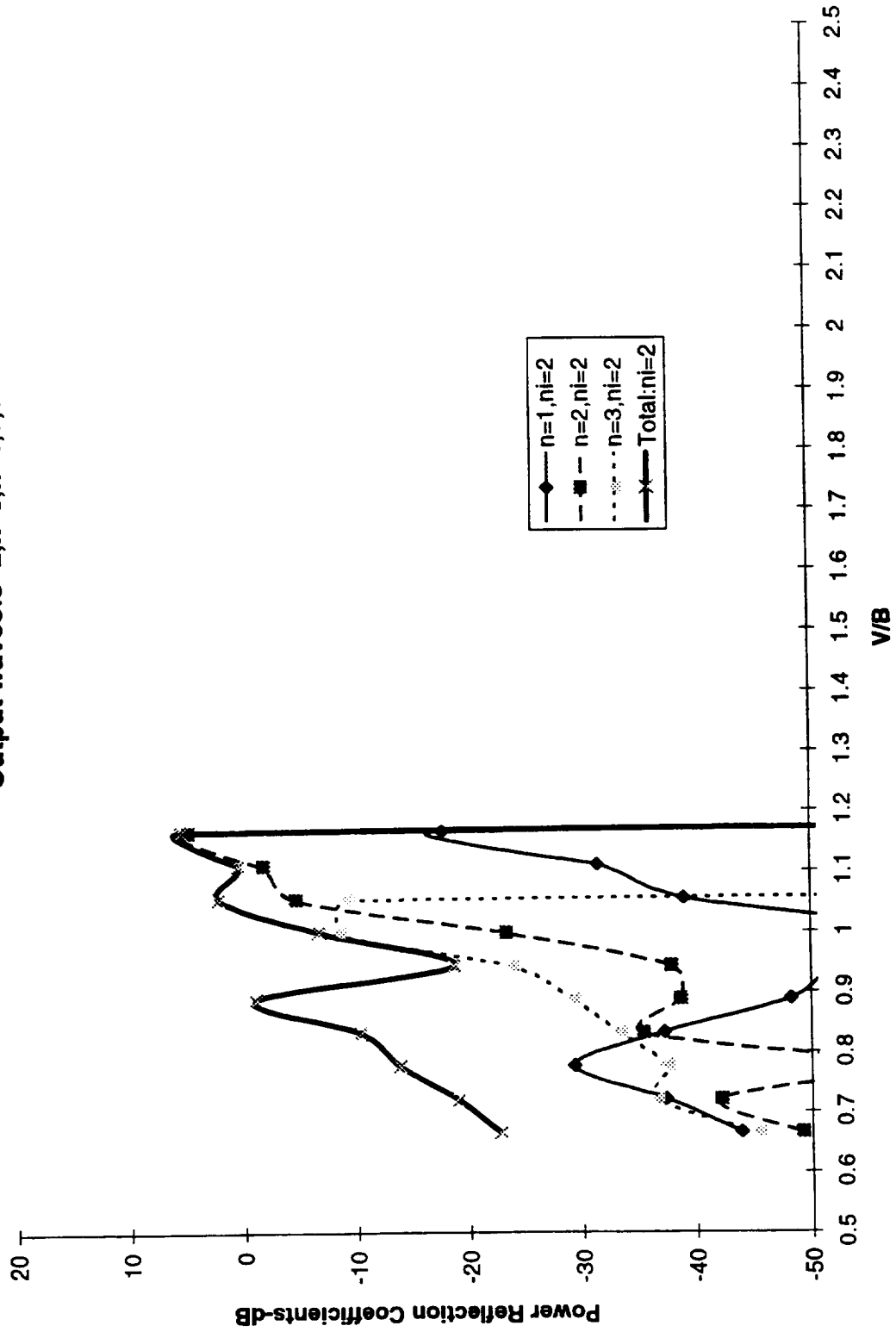
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

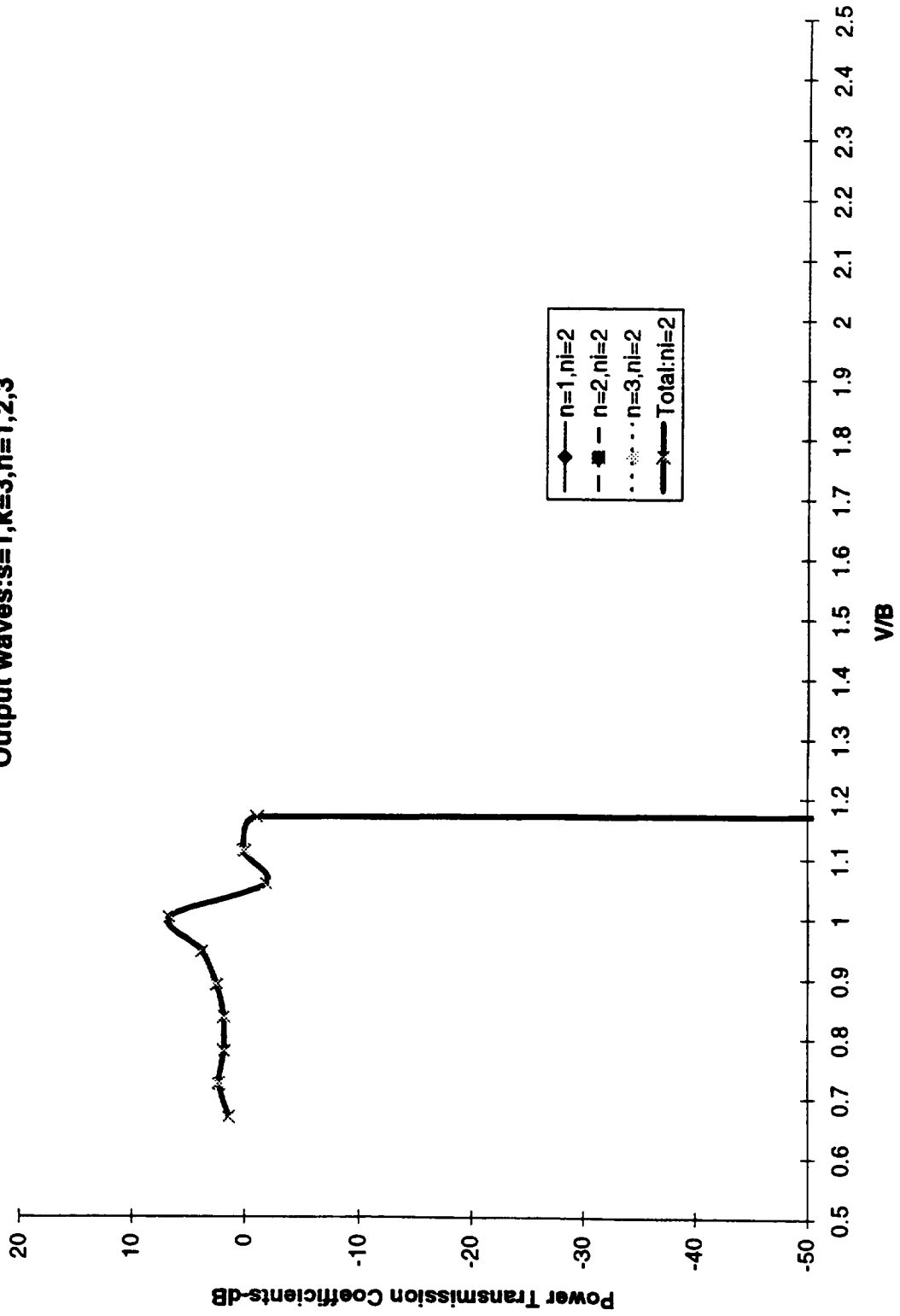
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

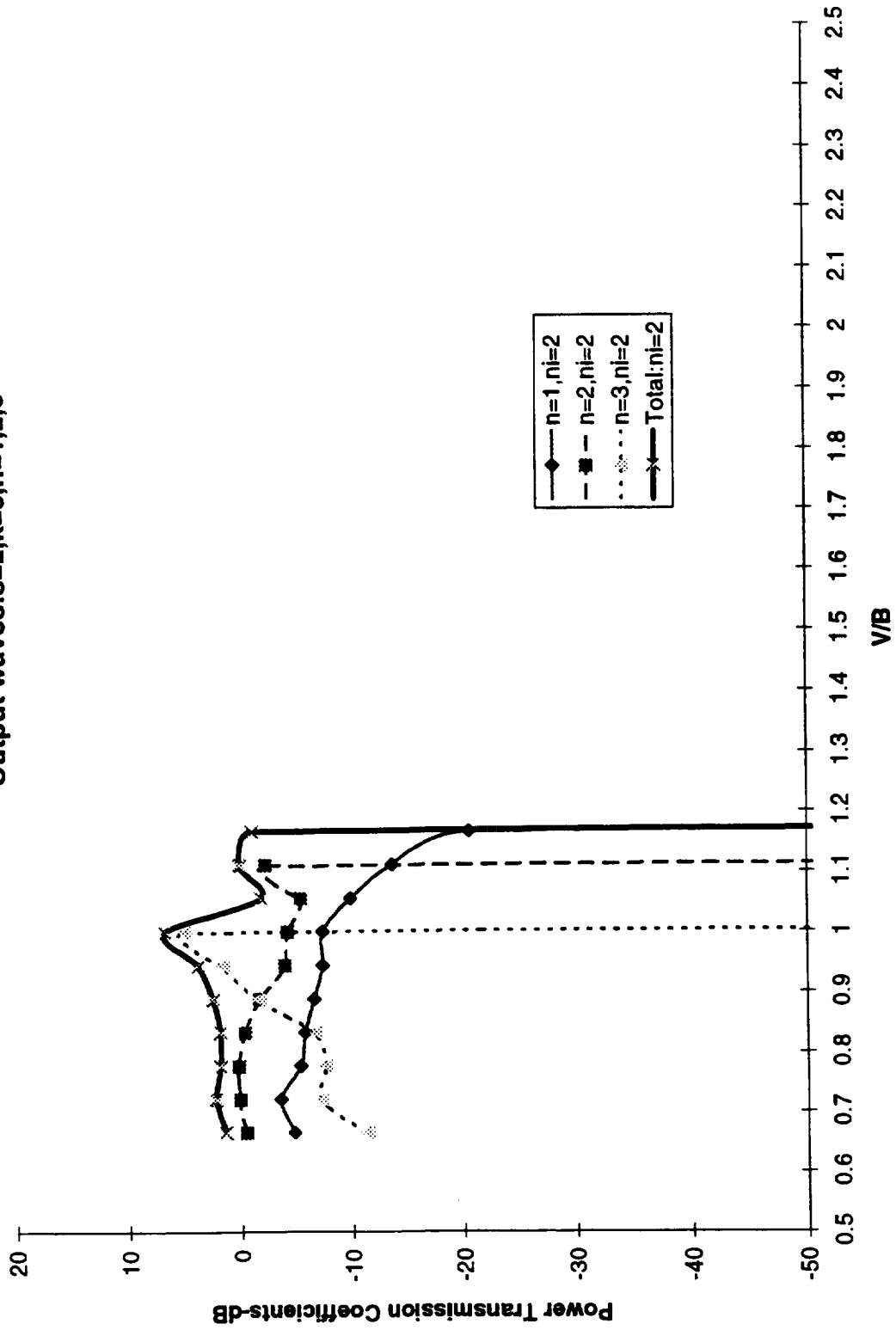
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_l=2, k_l=3, n_l=2$

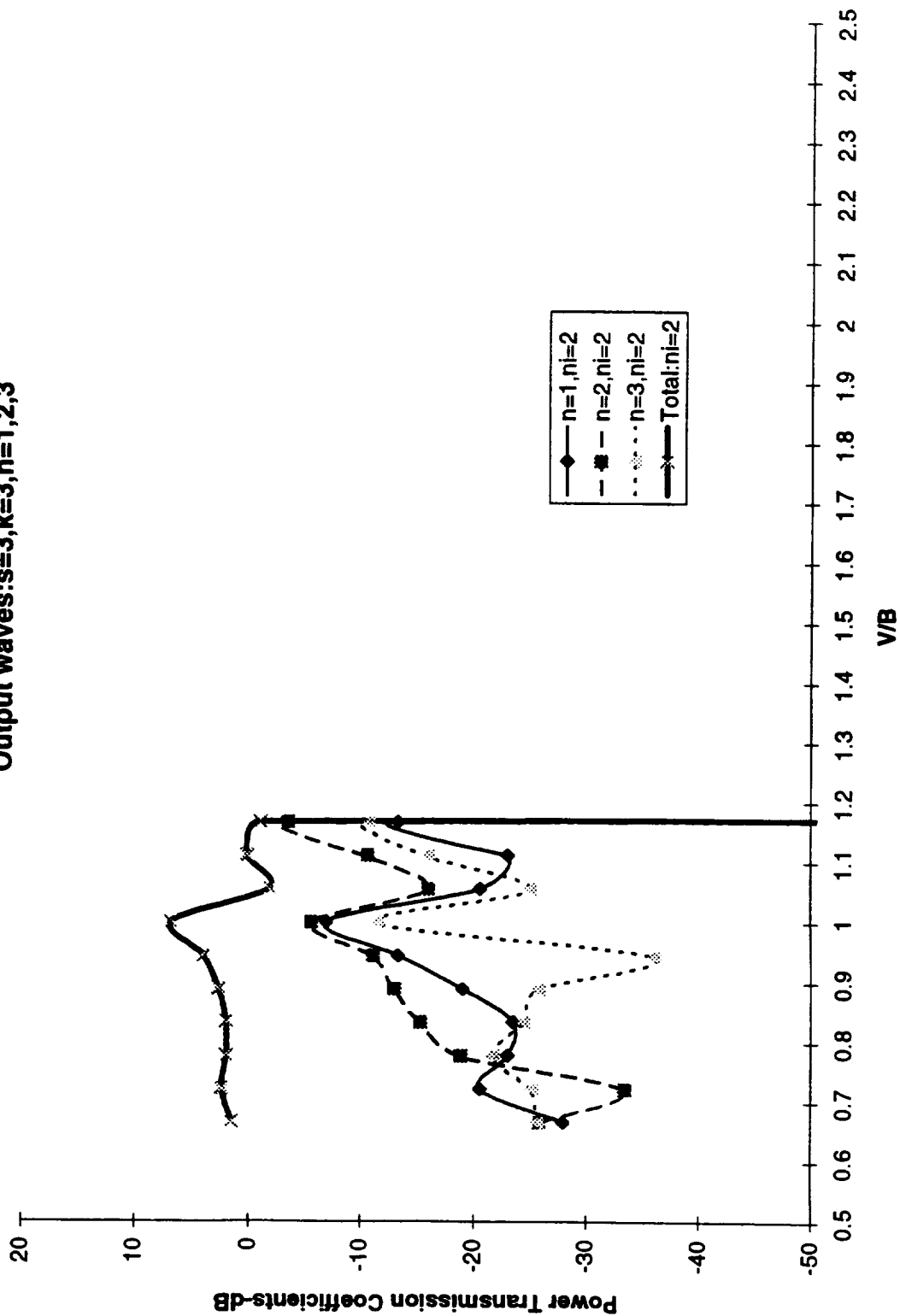
Output wave: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $sl=2, kl=3, nl=2$

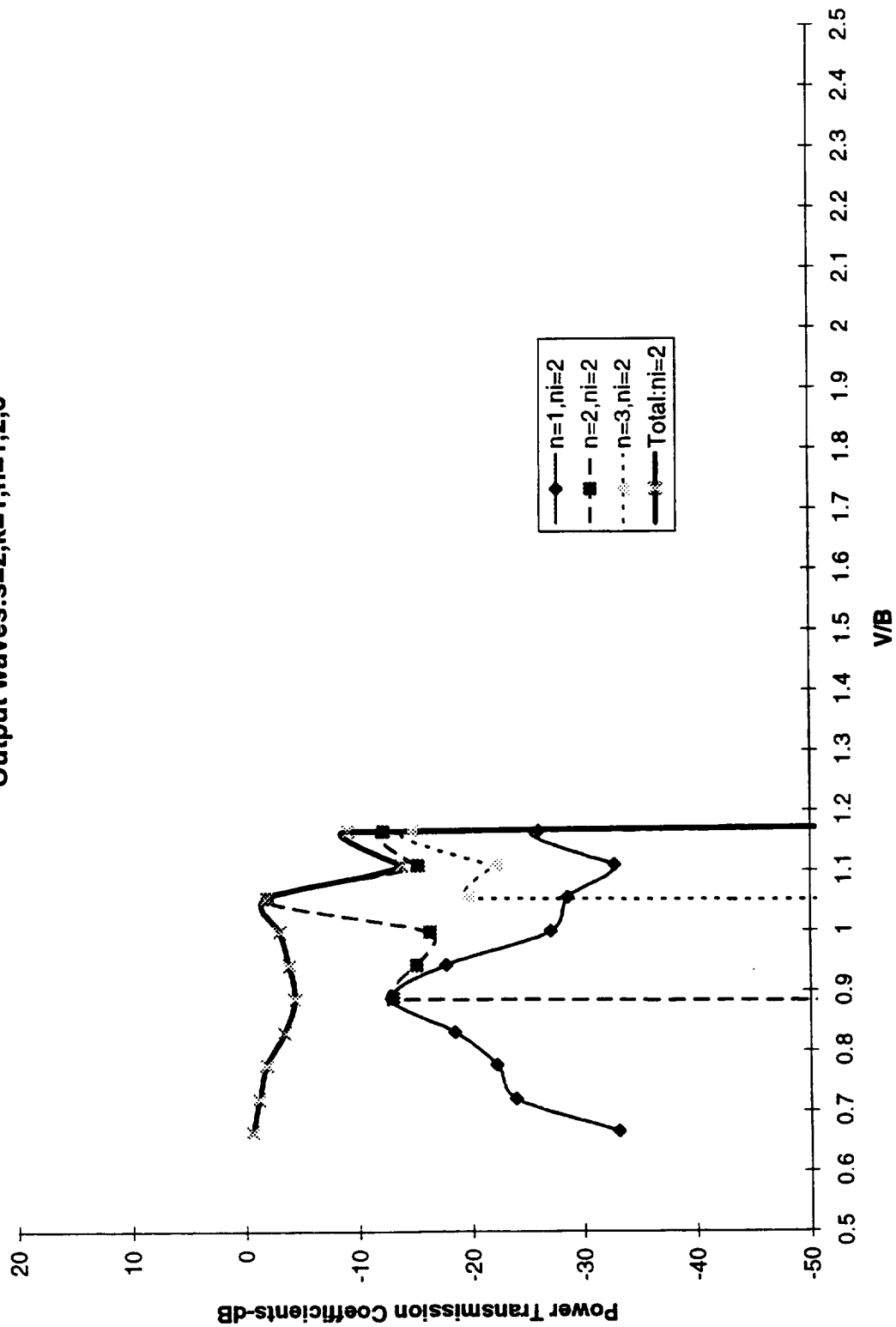
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

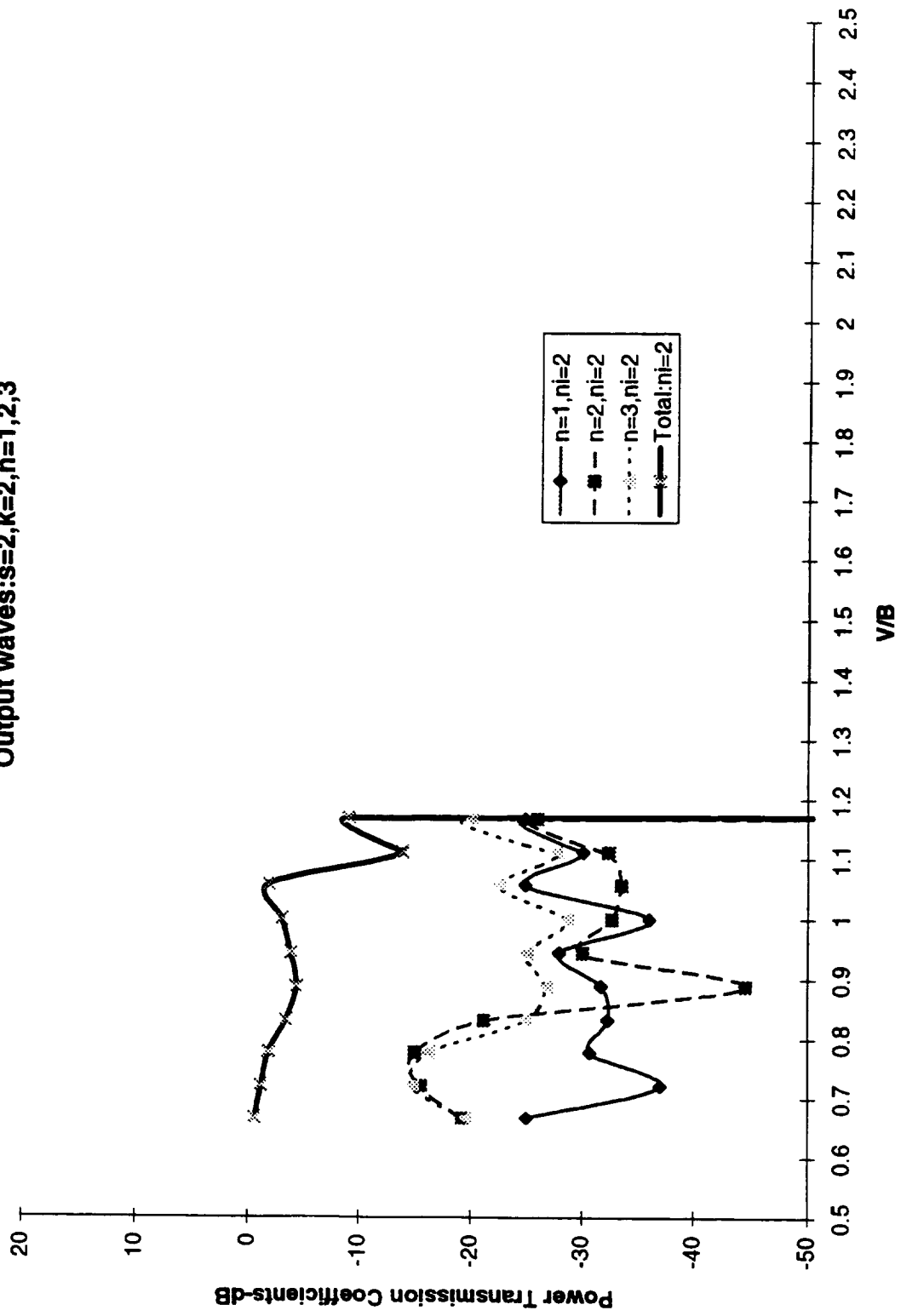
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

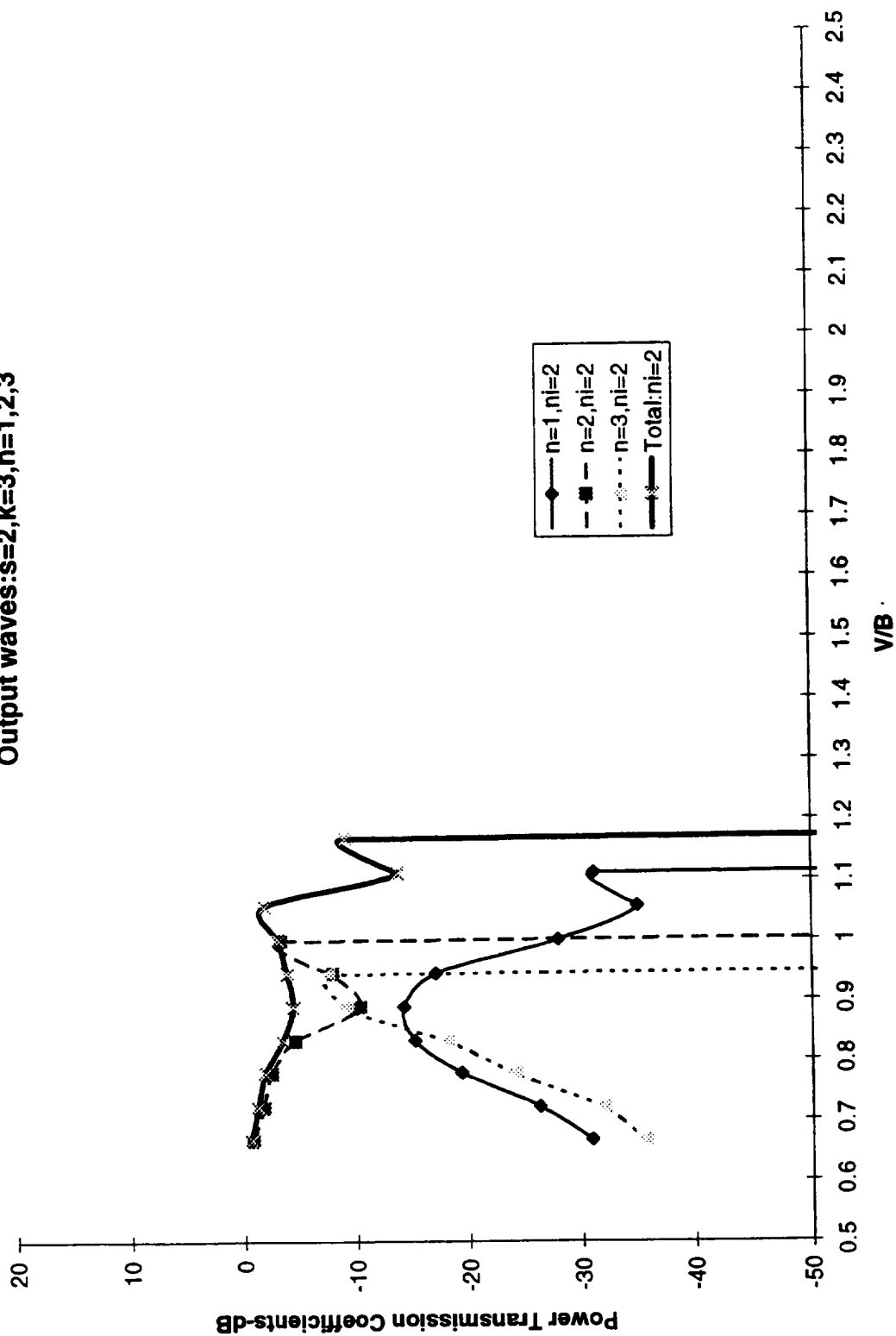
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

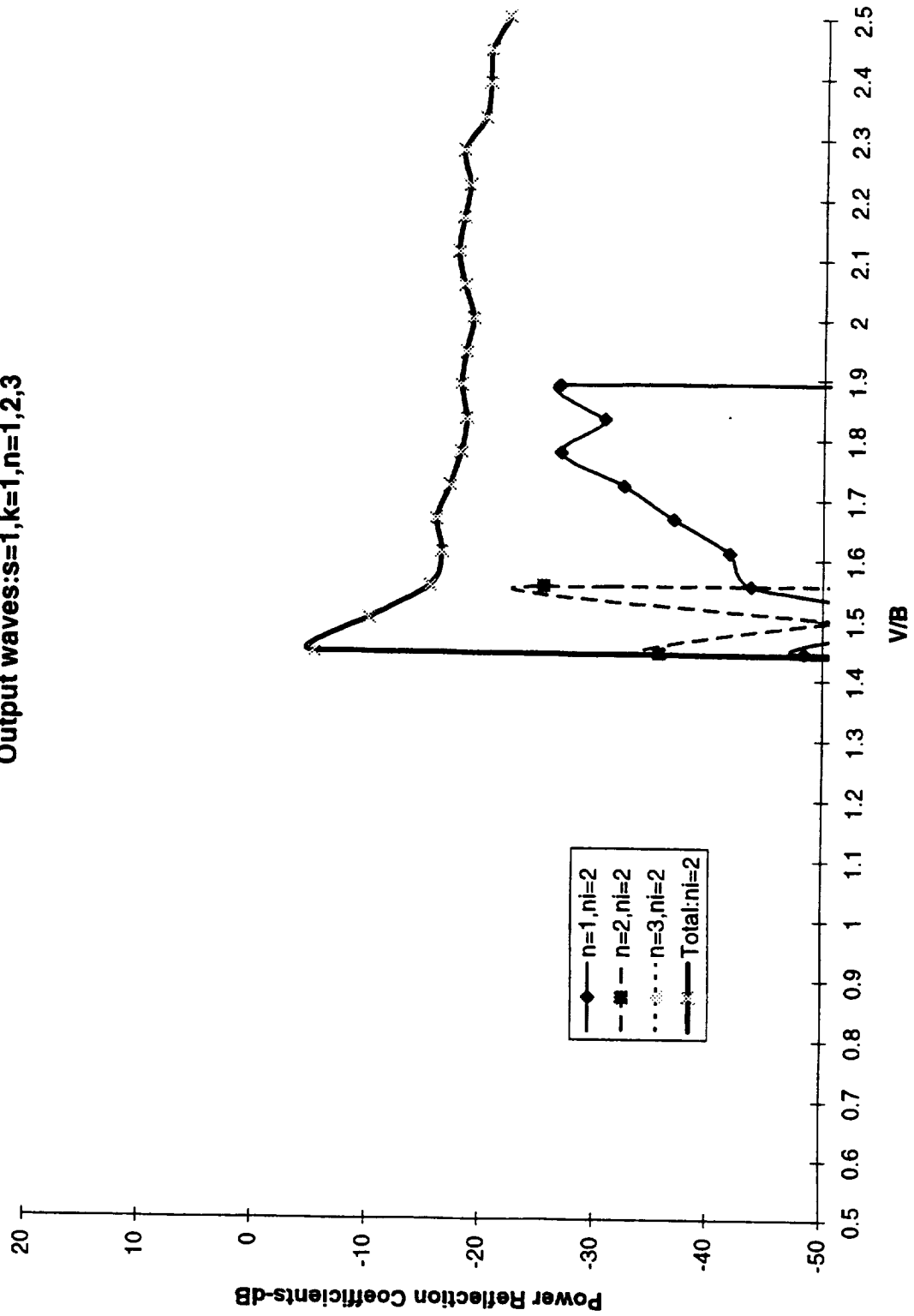
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

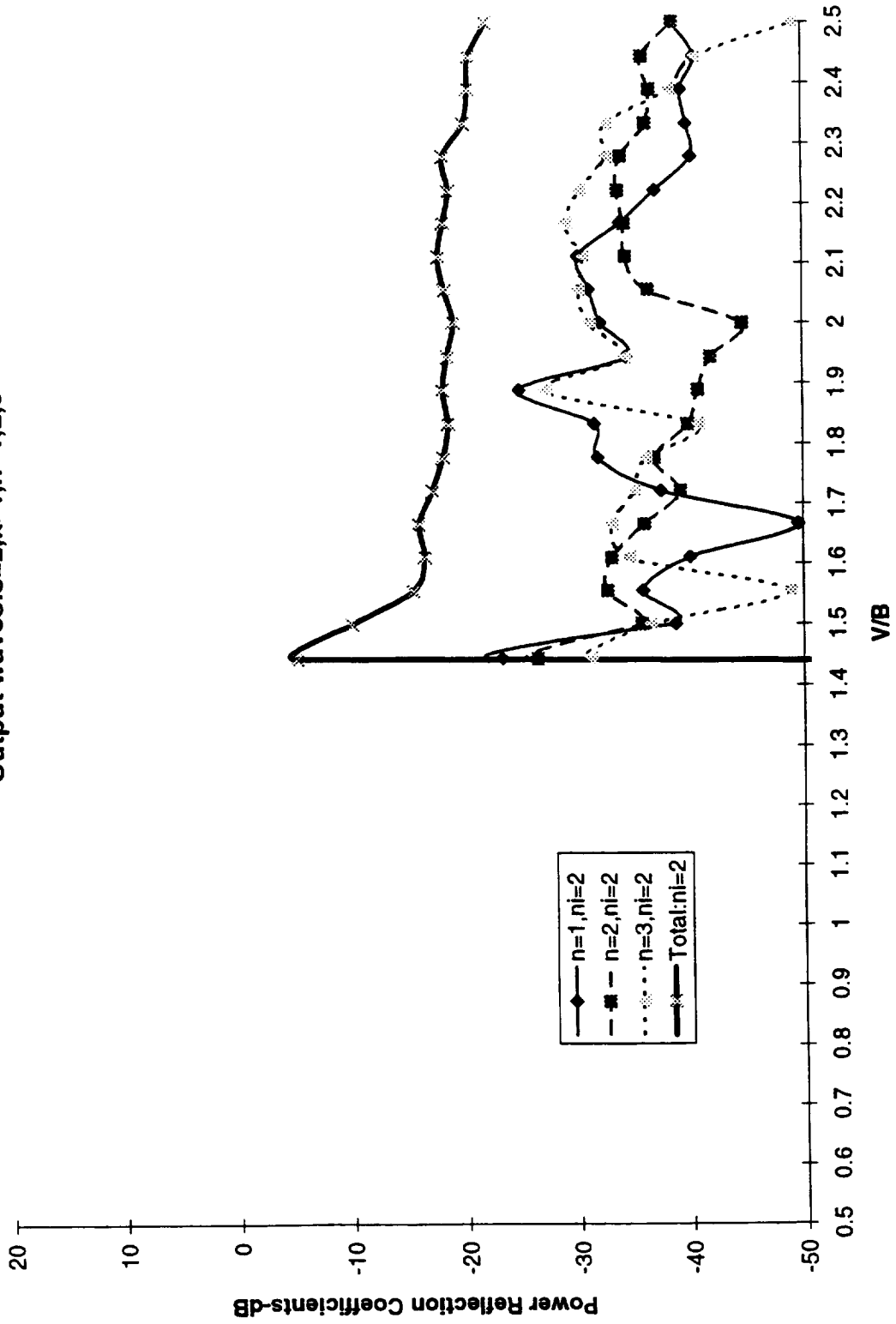
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

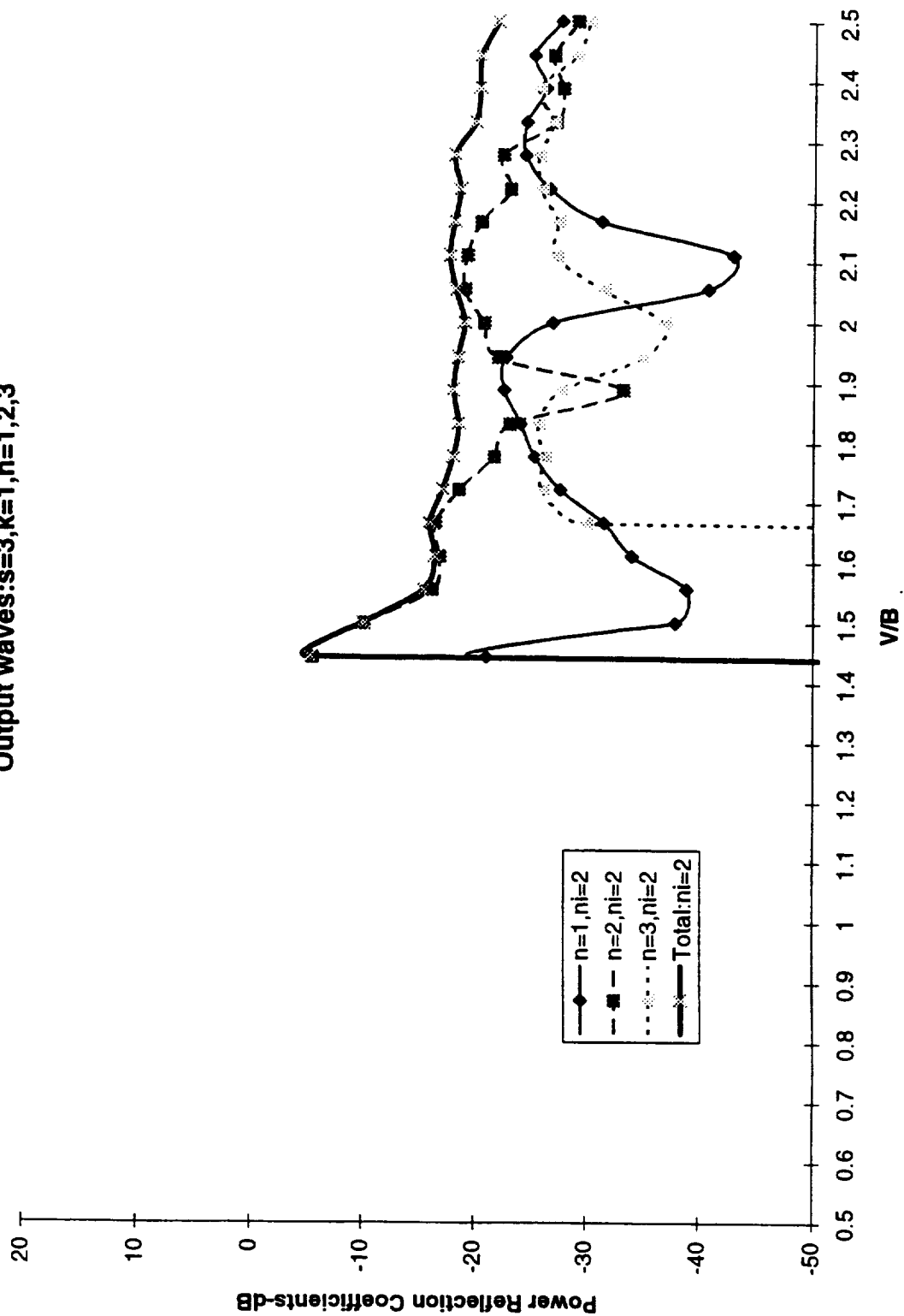
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

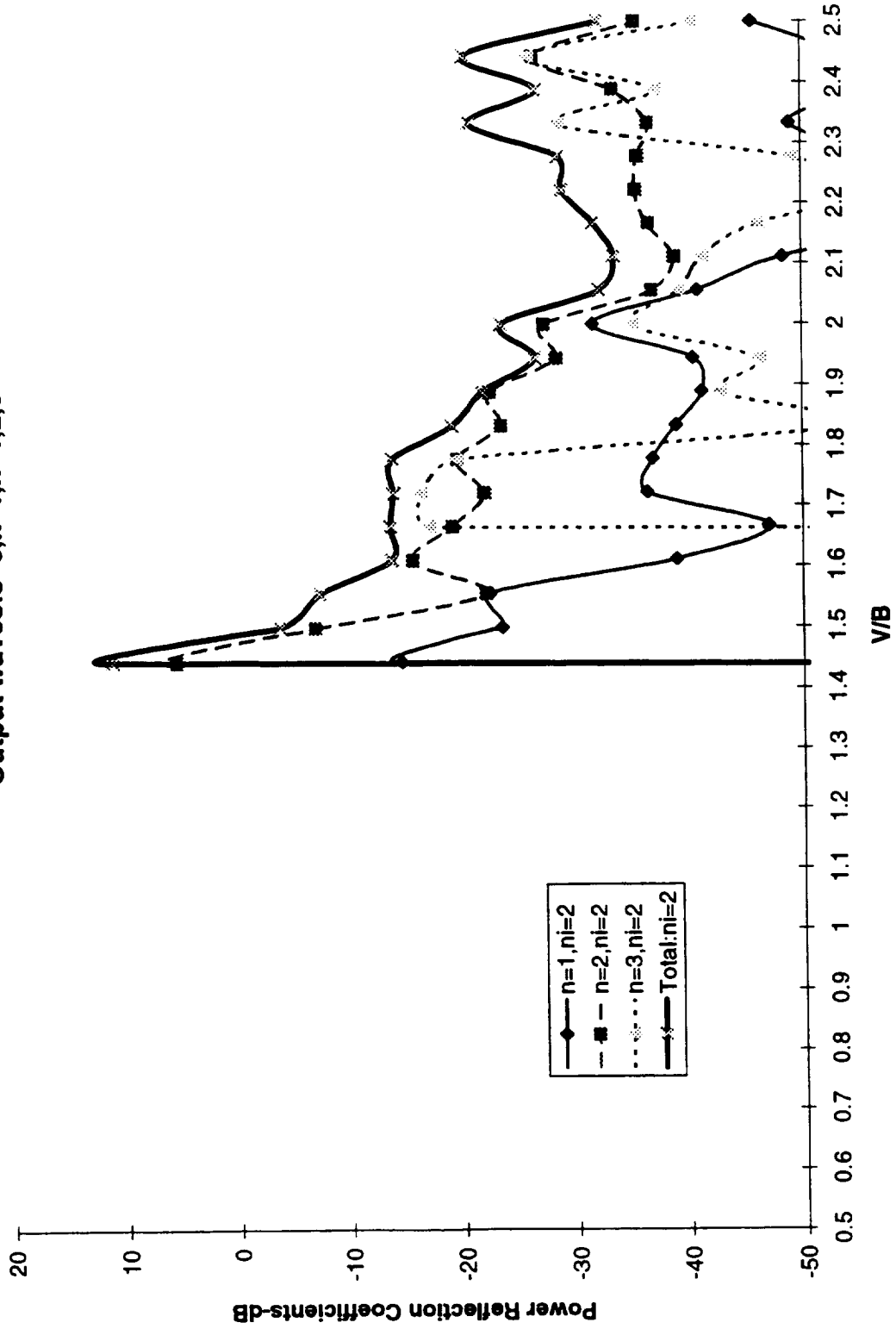
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

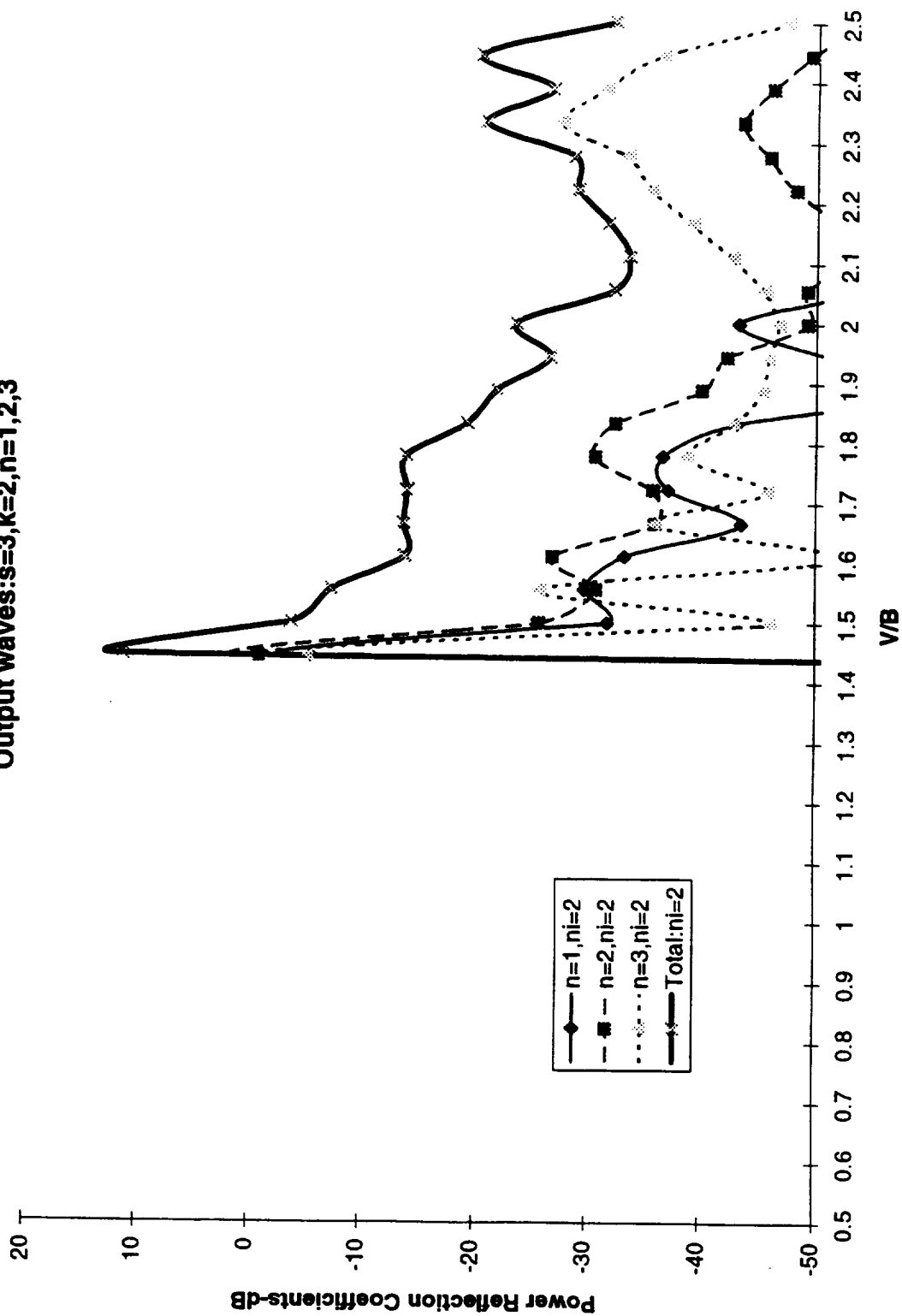
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

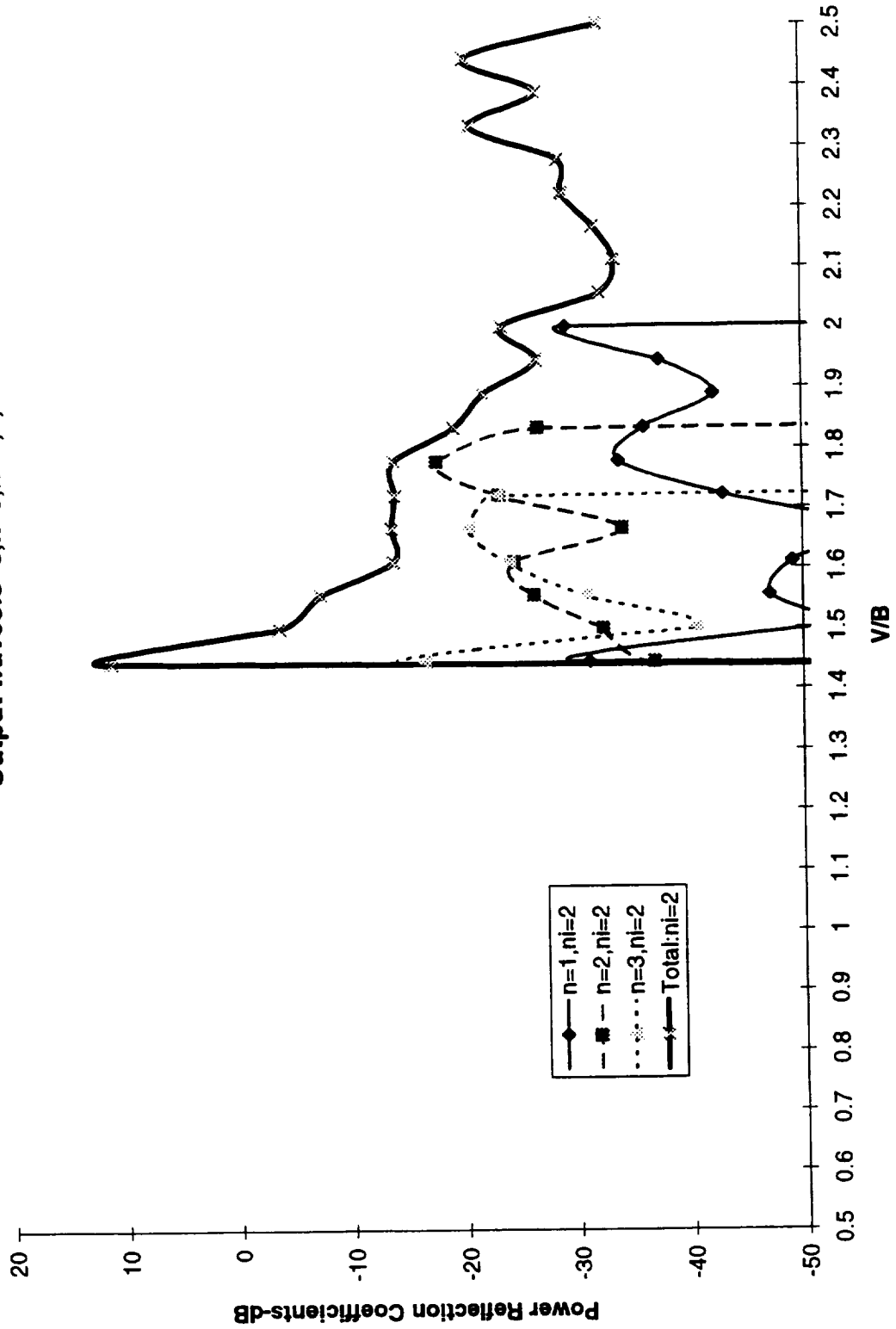
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

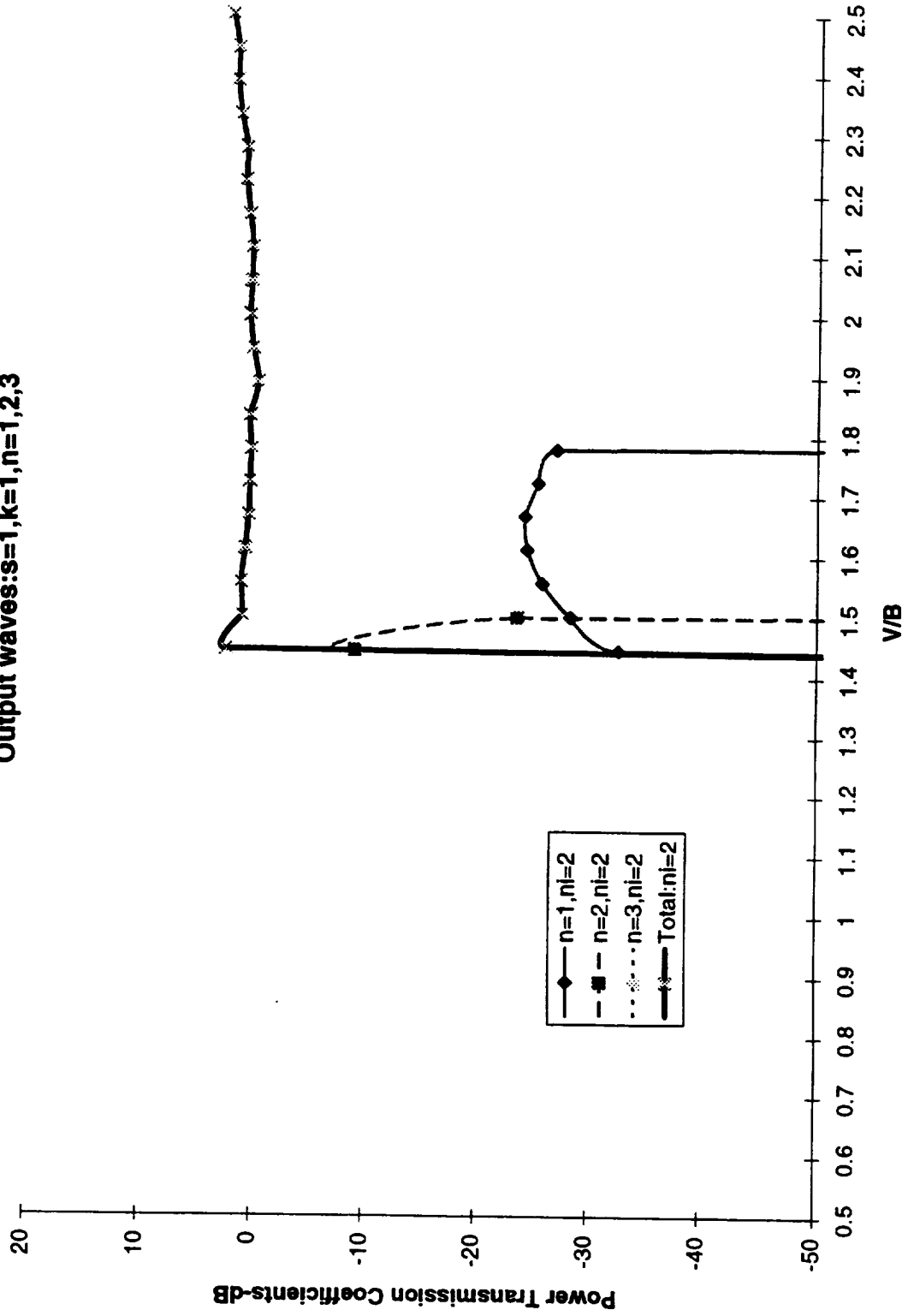
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

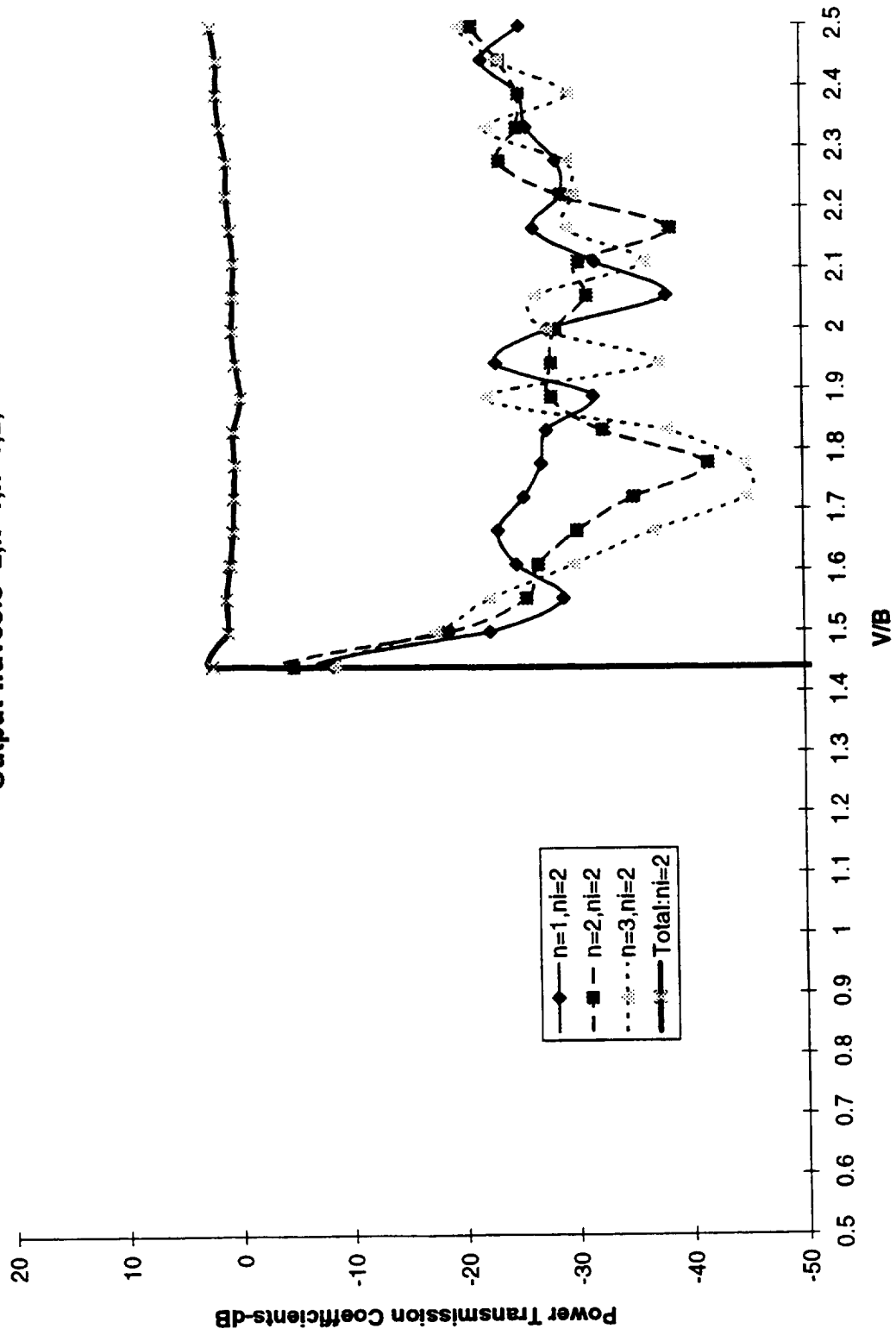
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

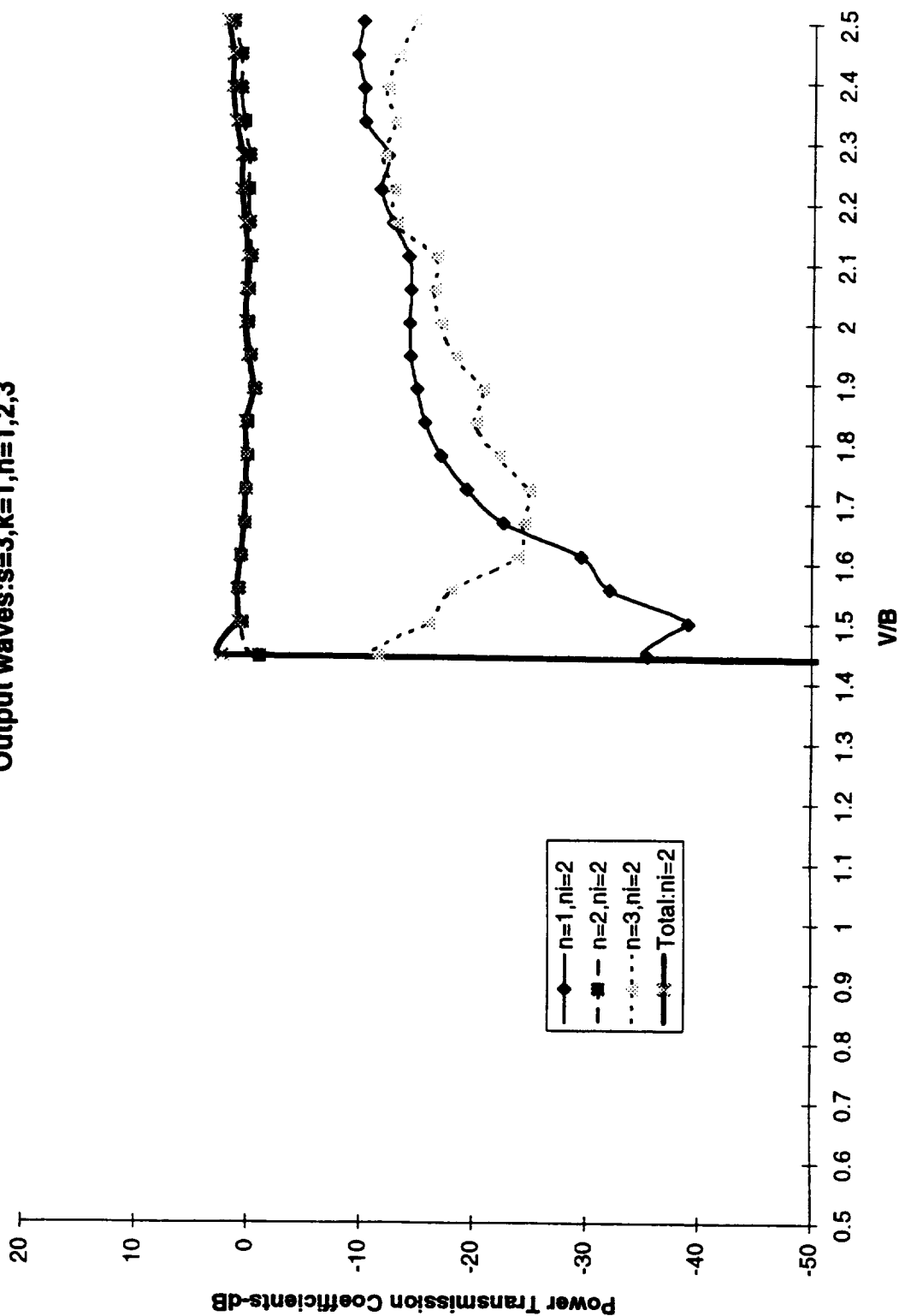
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

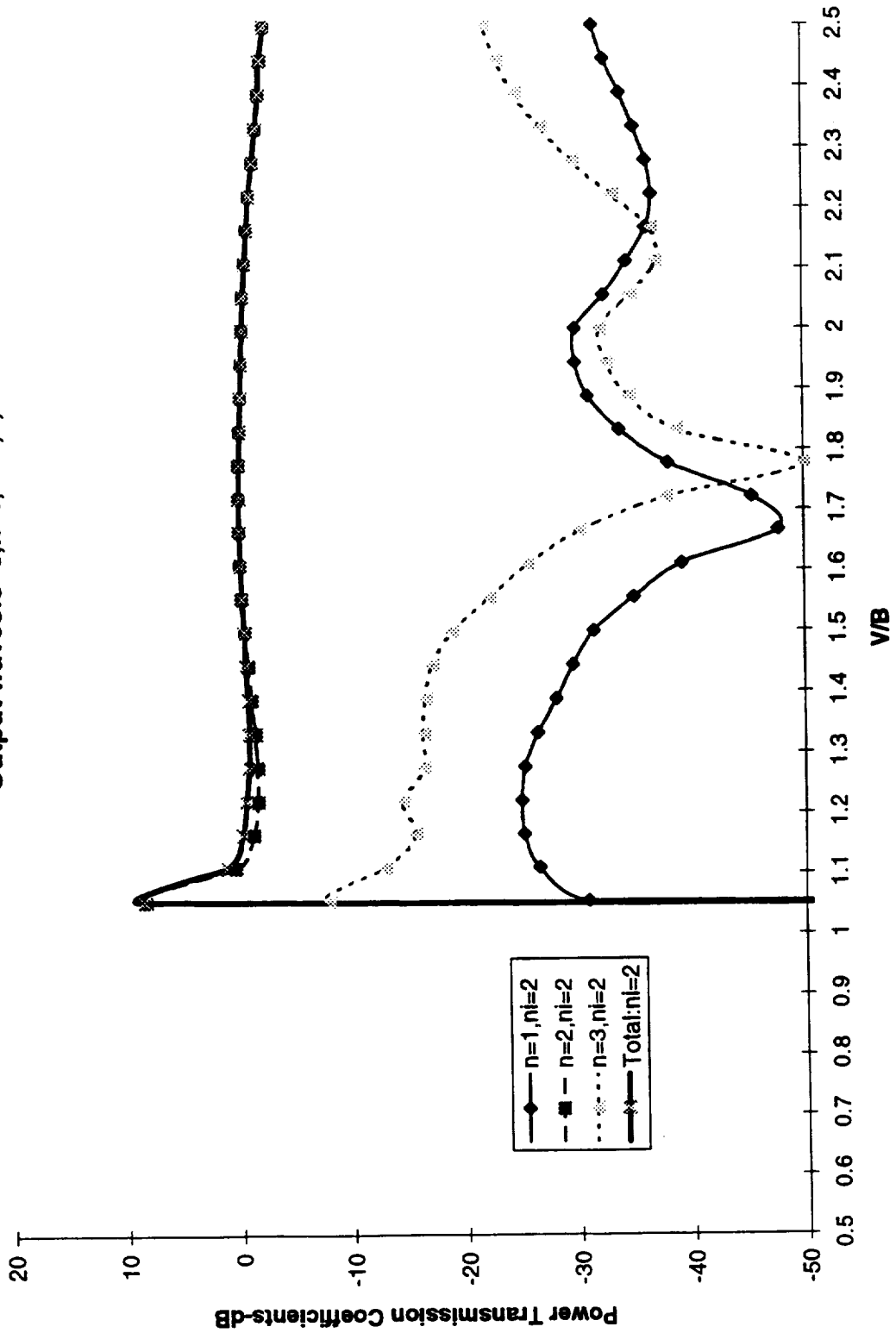
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

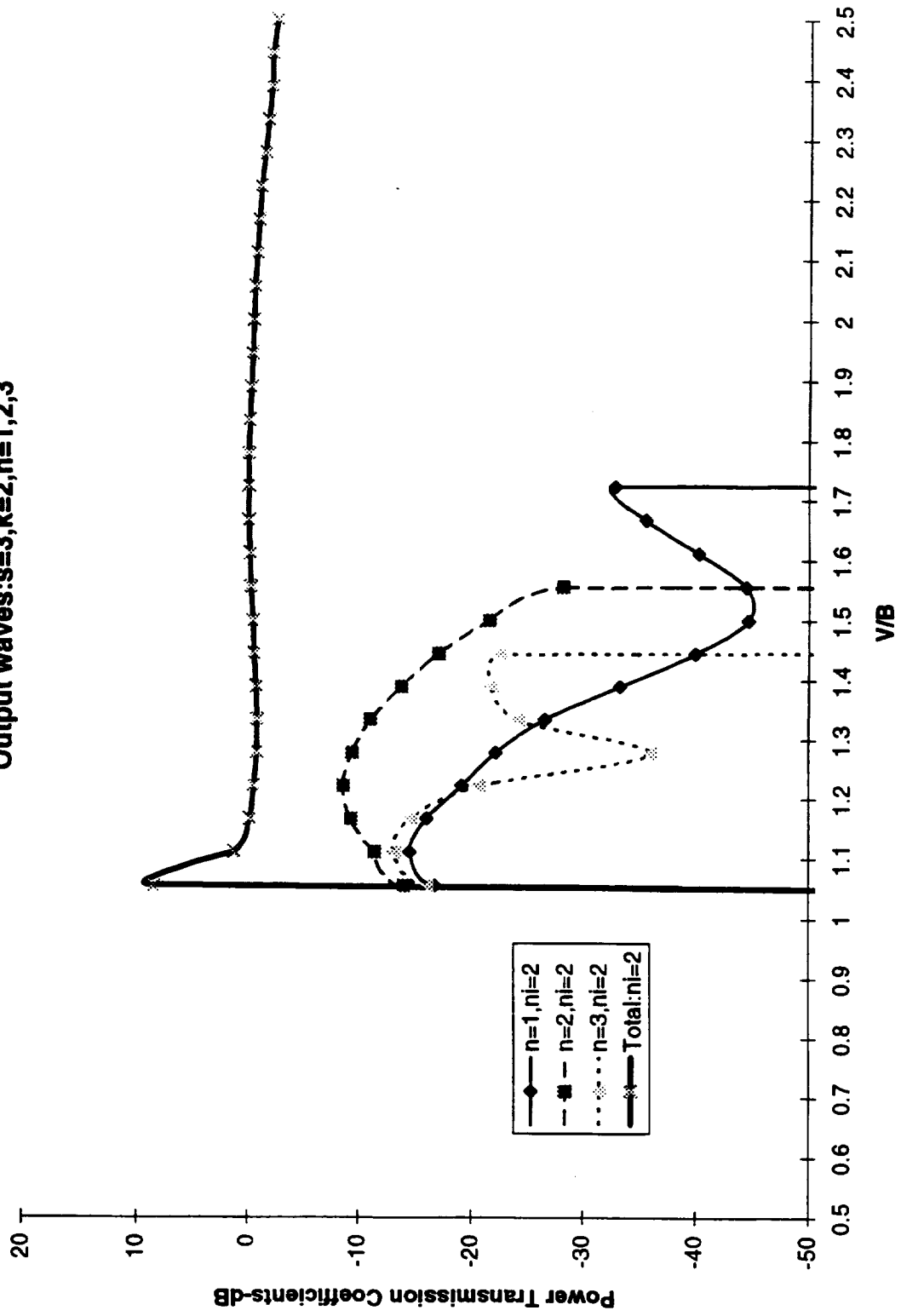
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_l=3, k_l=1, n_l=2$

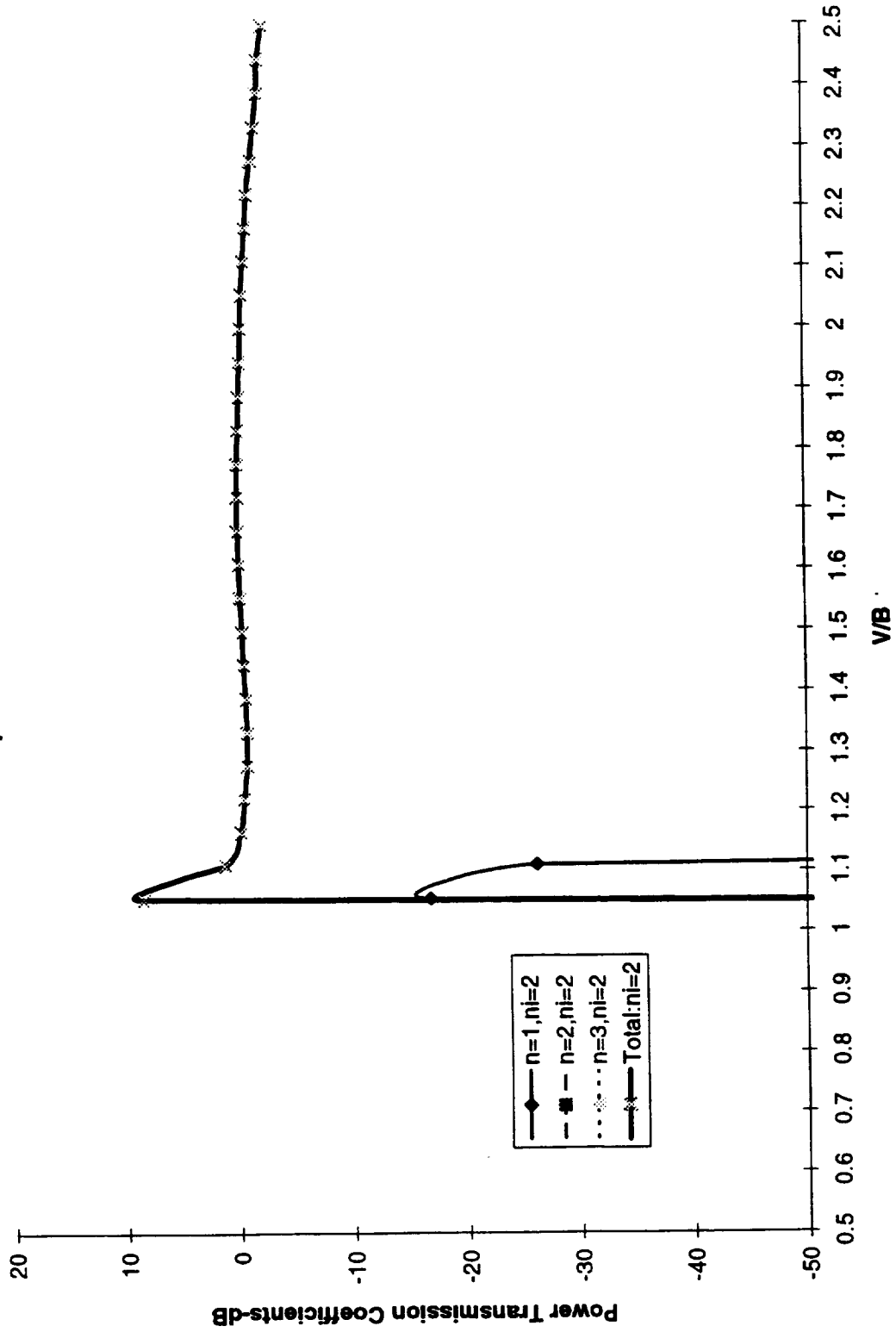
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_l=3, k_l=1, n_l=2$

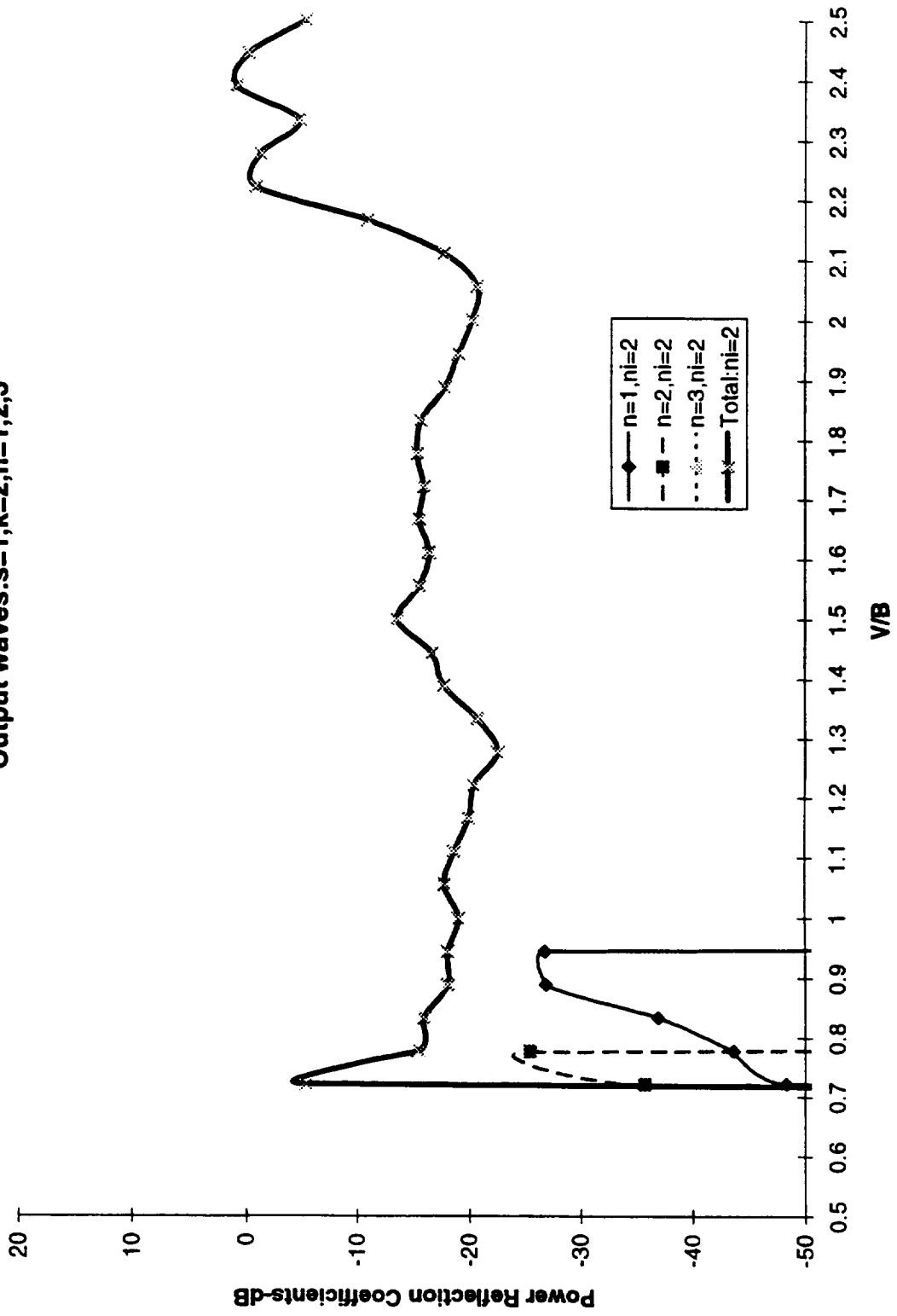
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $sl=3, kl=2, nl=2$

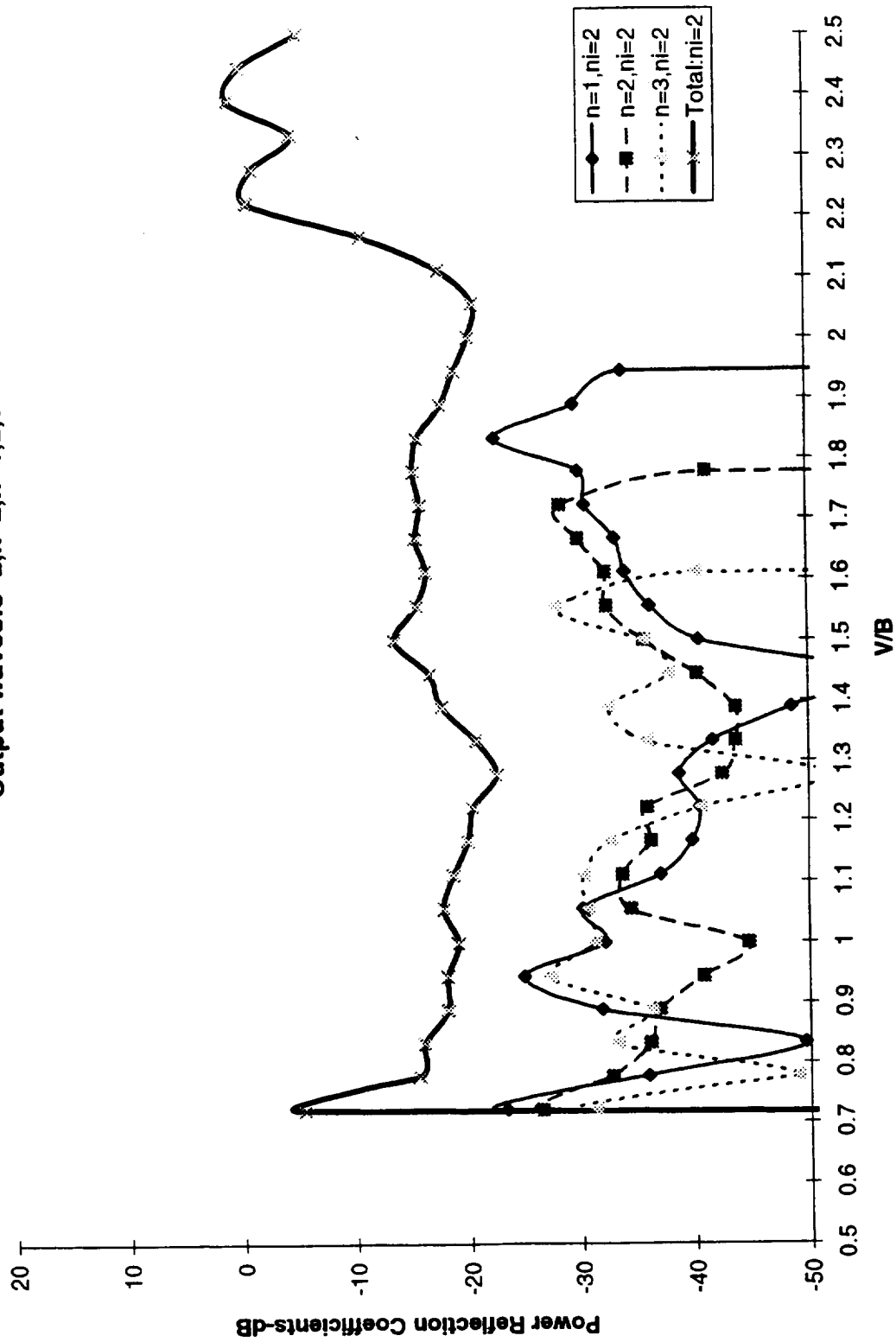
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_l=3, k_l=2, n_l=2$

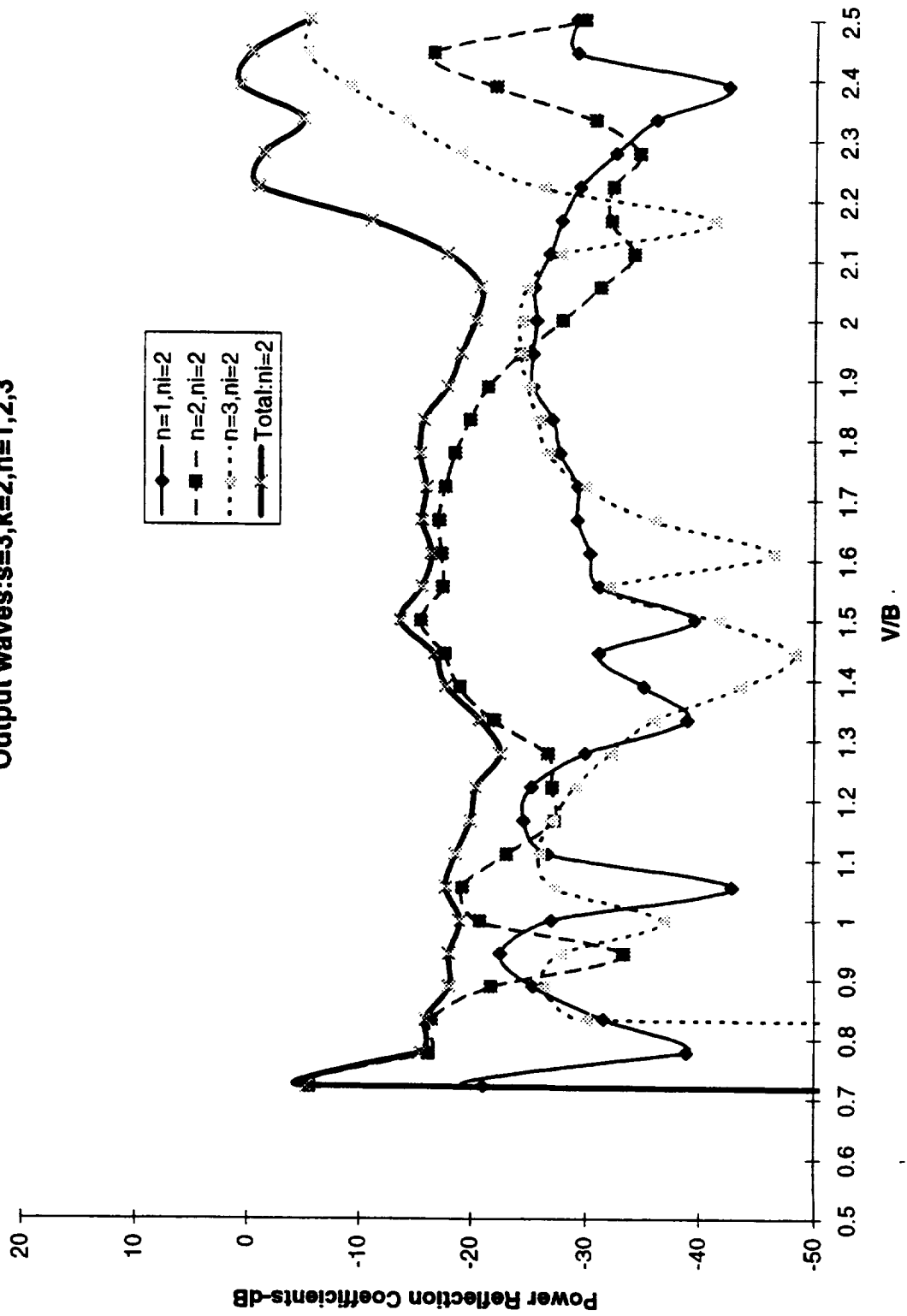
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

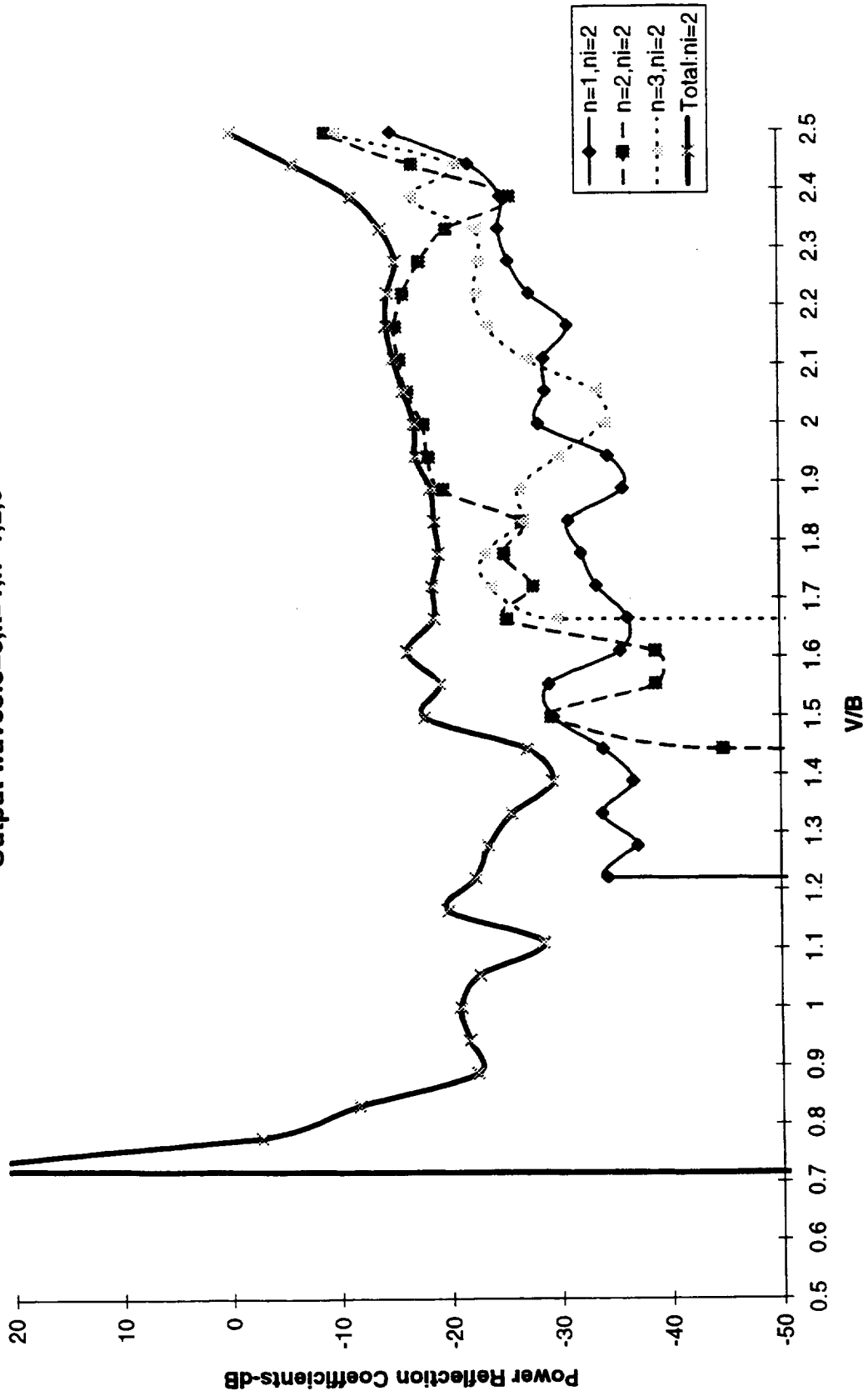
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $sl=3, kl=2, ni=2$

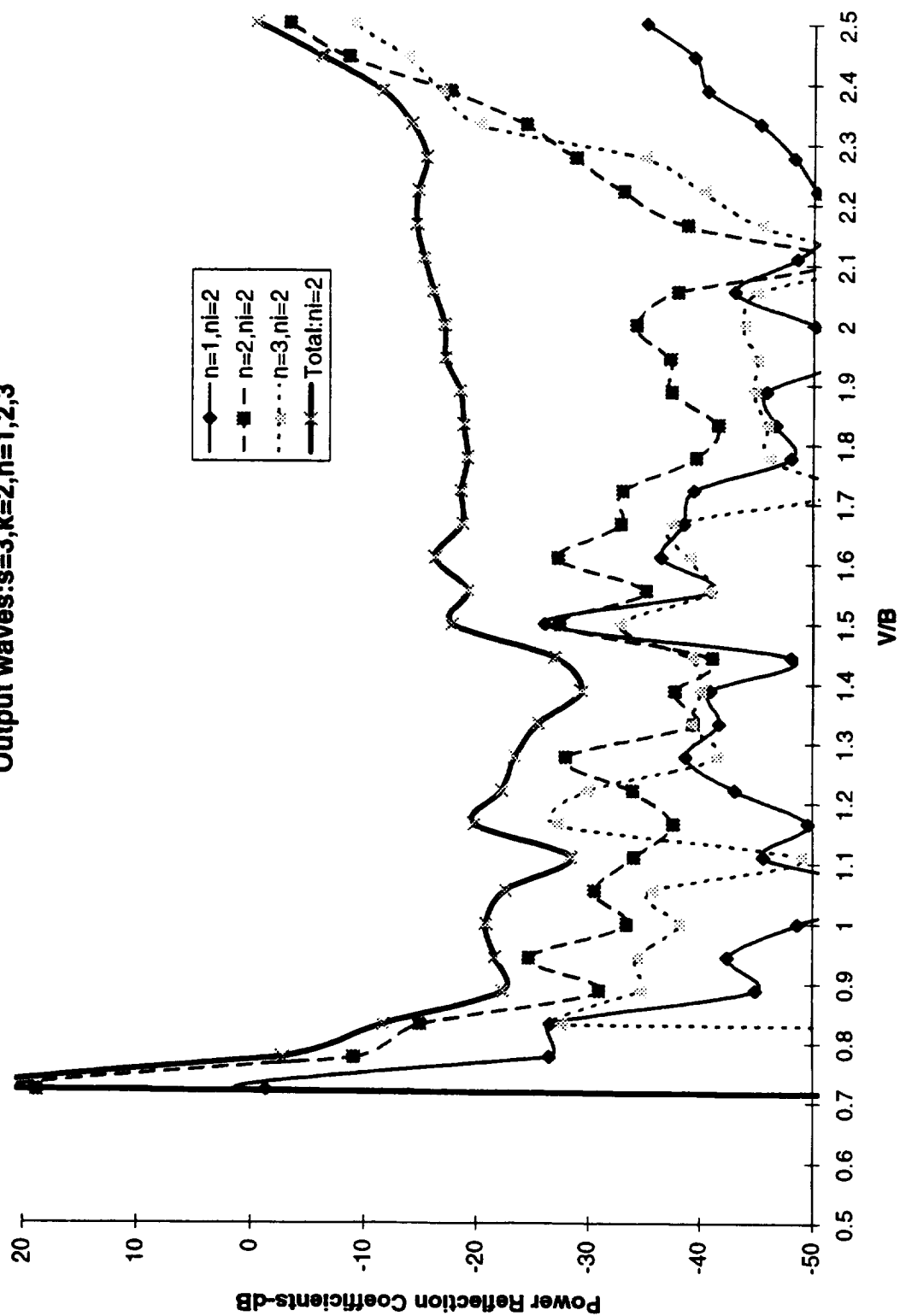
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

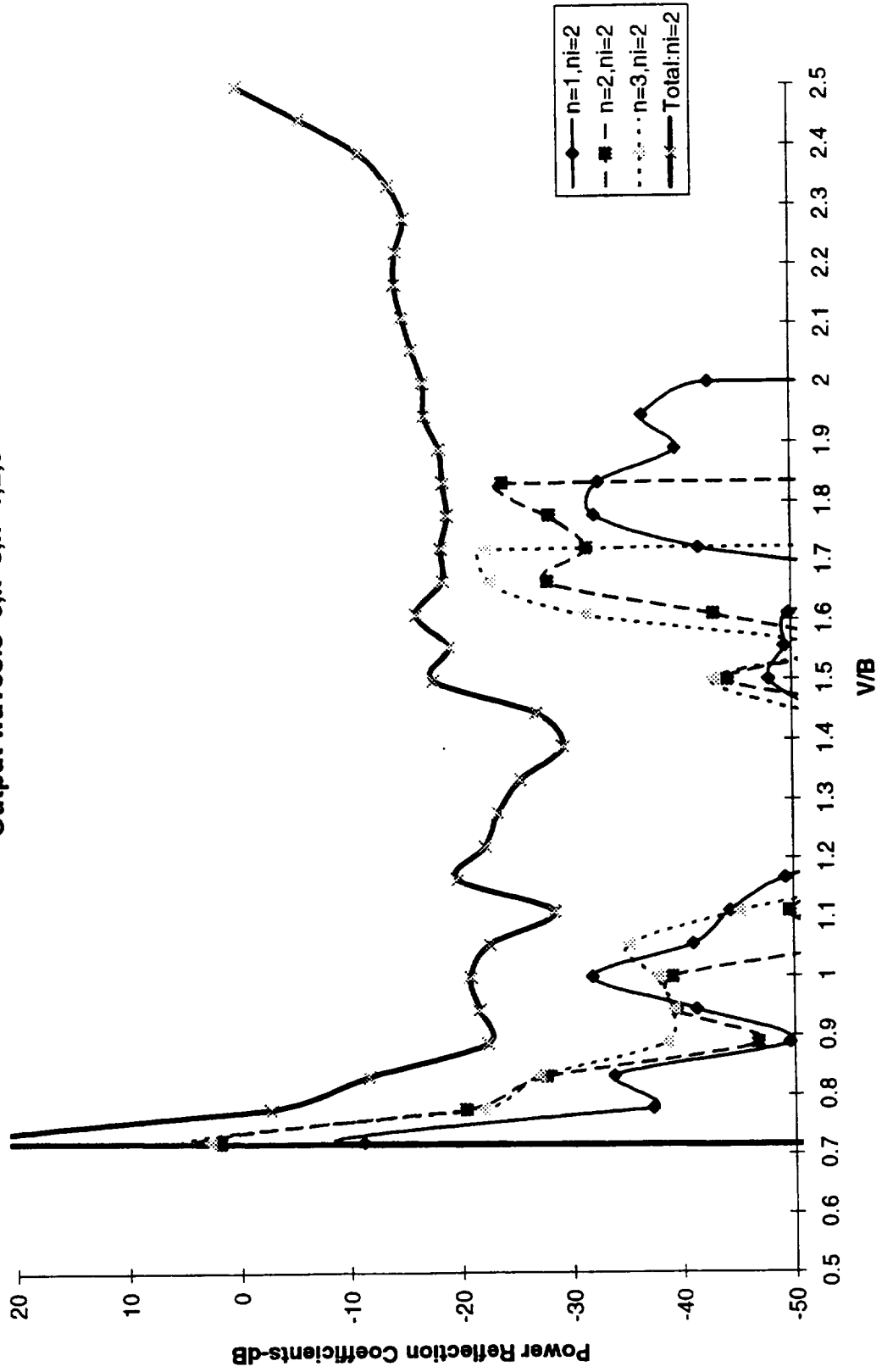
Output waves: $s=3, k=2, n=1, 2, 3$



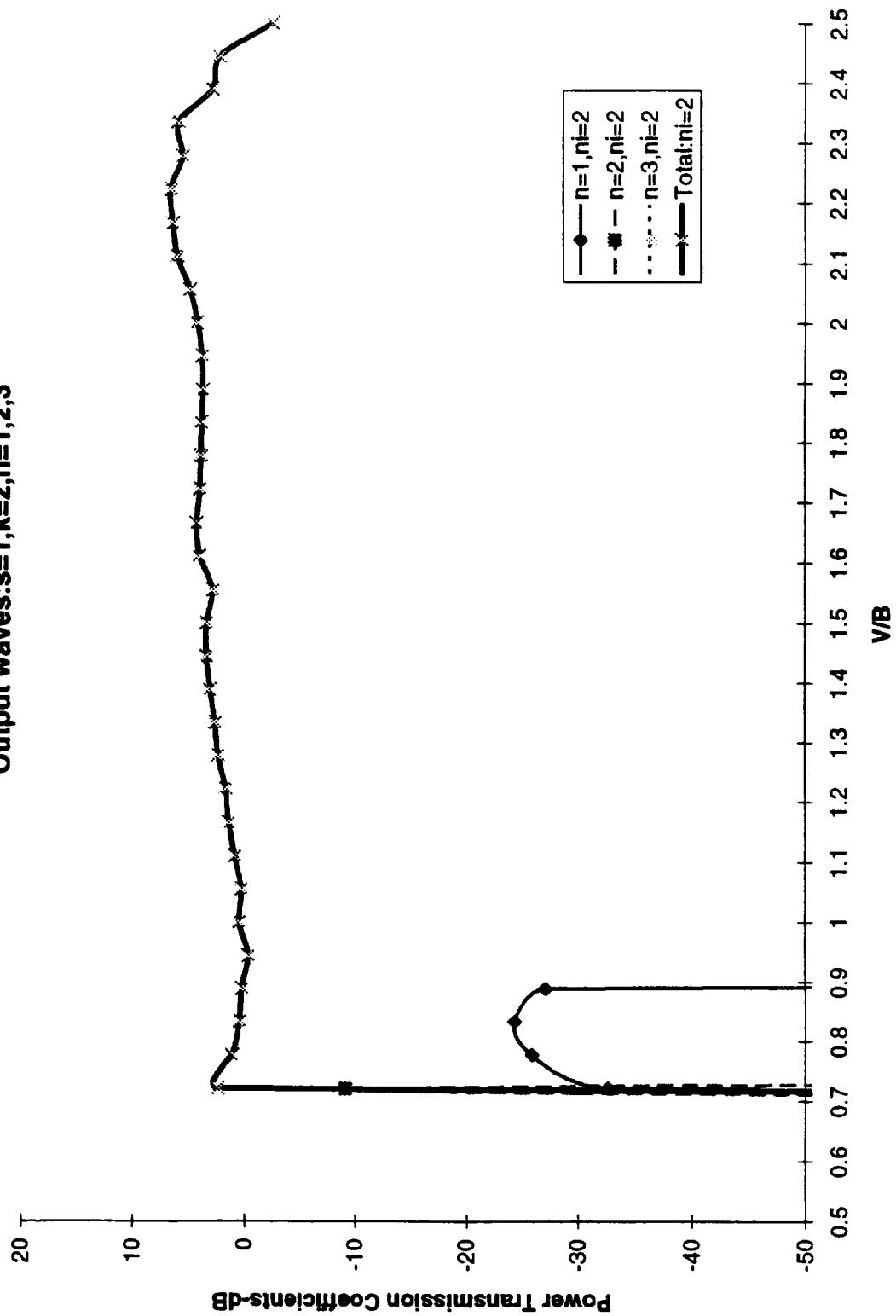
Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

Output waves: $s=3, k=3, n=1, 2, 3$



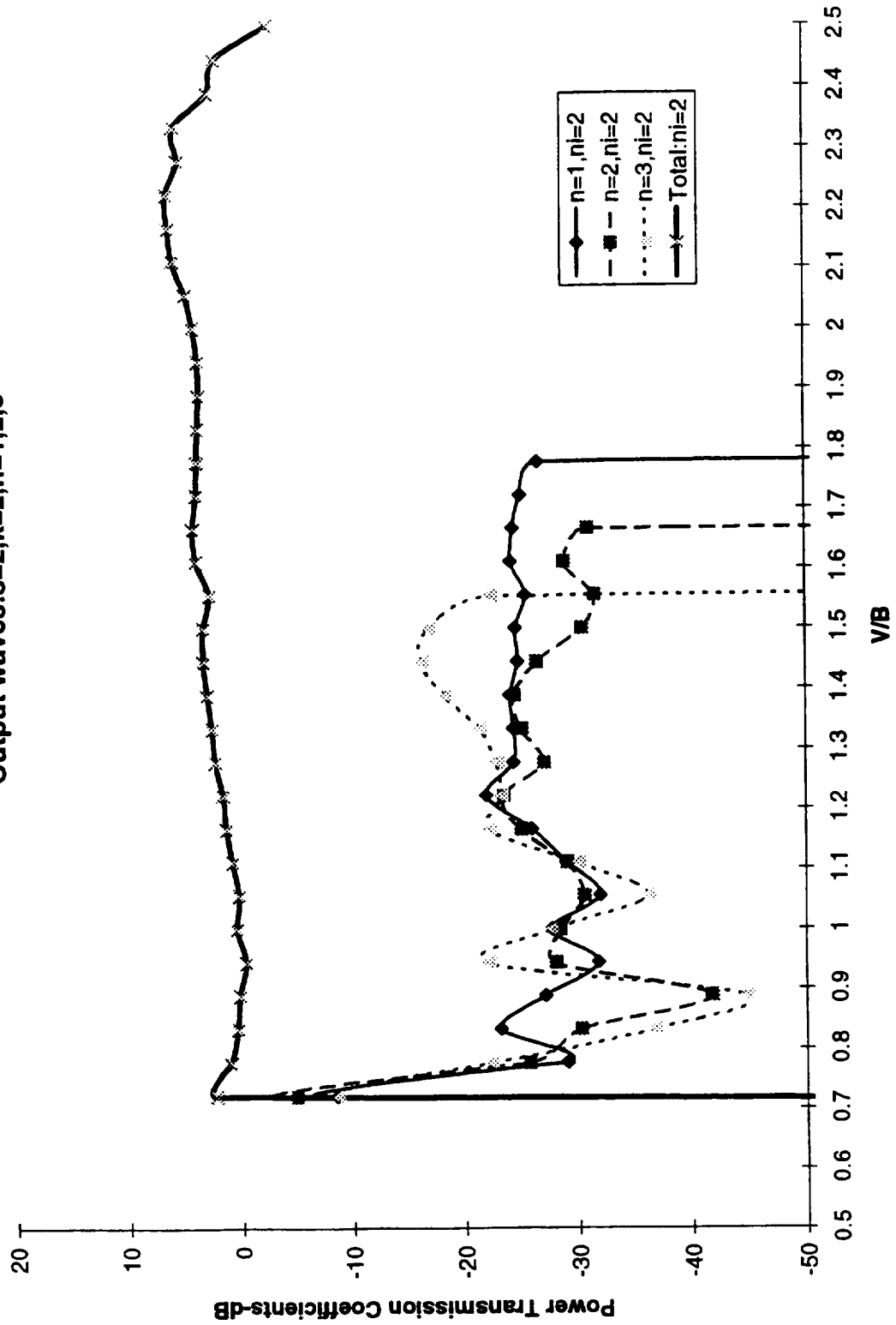
Rotor Transmission-High Speed Case
Input wave: si=3, ki=2, ni=2
Output waves: s=1, k=2, n=1, 2, 3



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

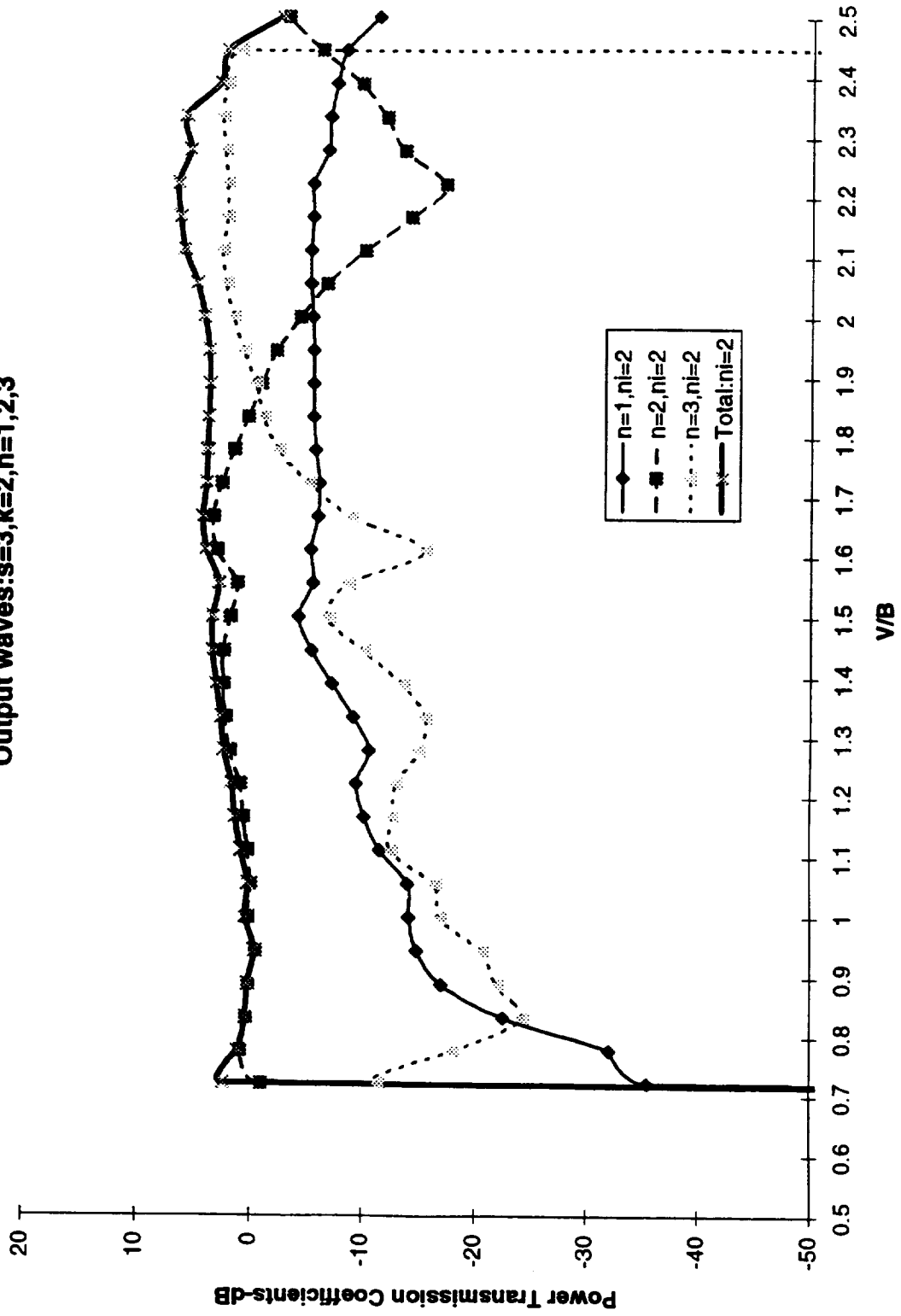
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

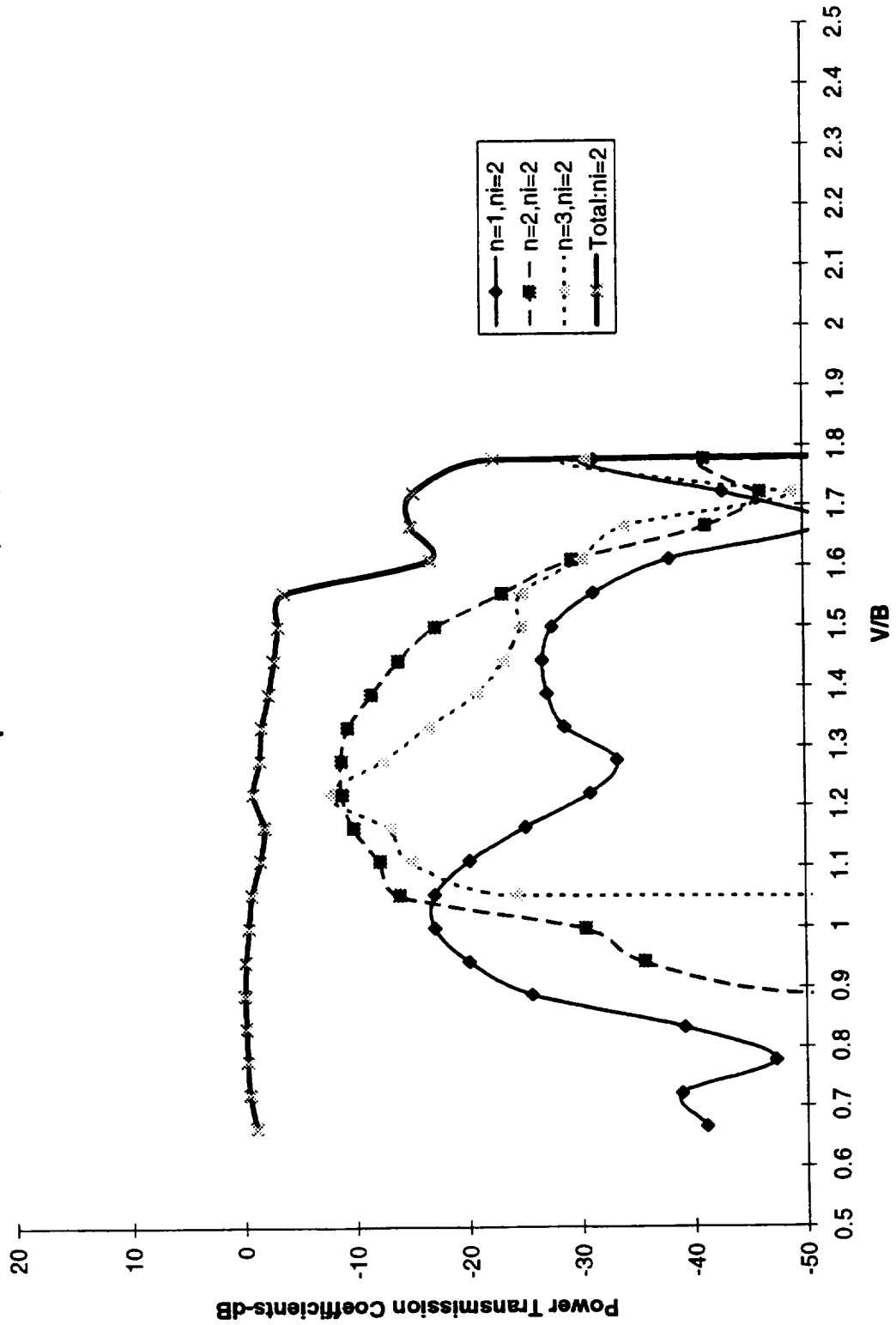
Output wave: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $sl=3, ki=2, ni=2$

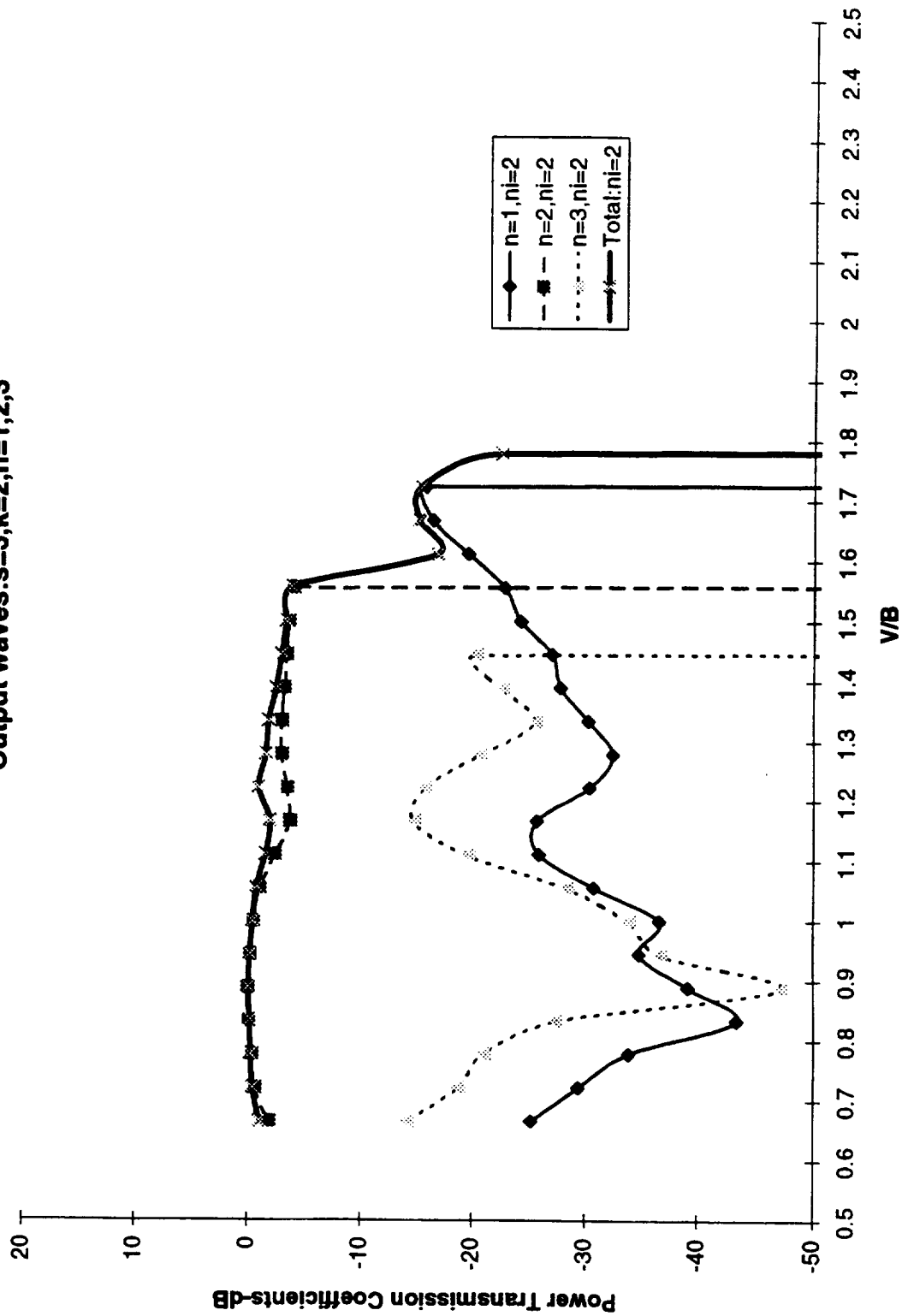
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

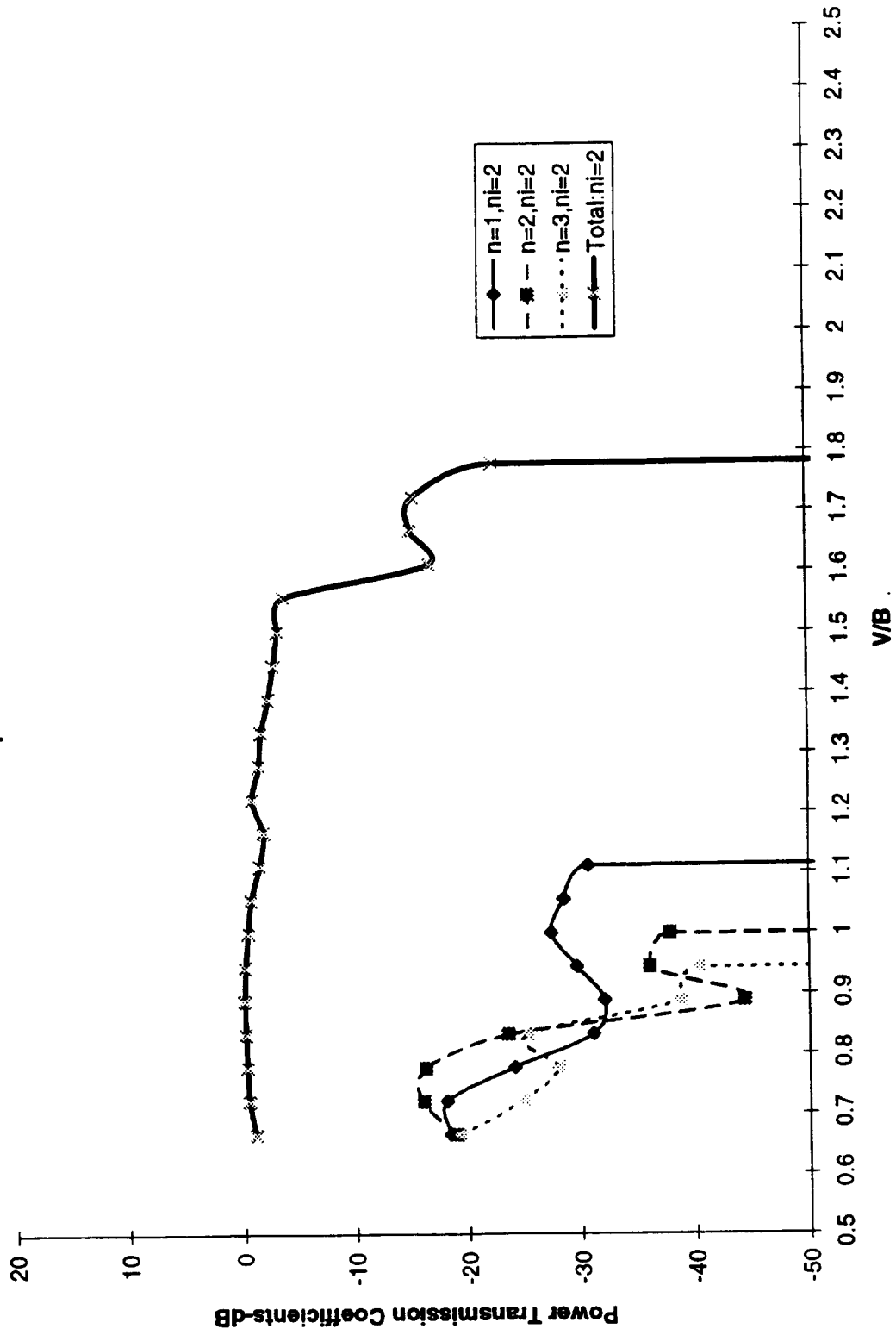
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

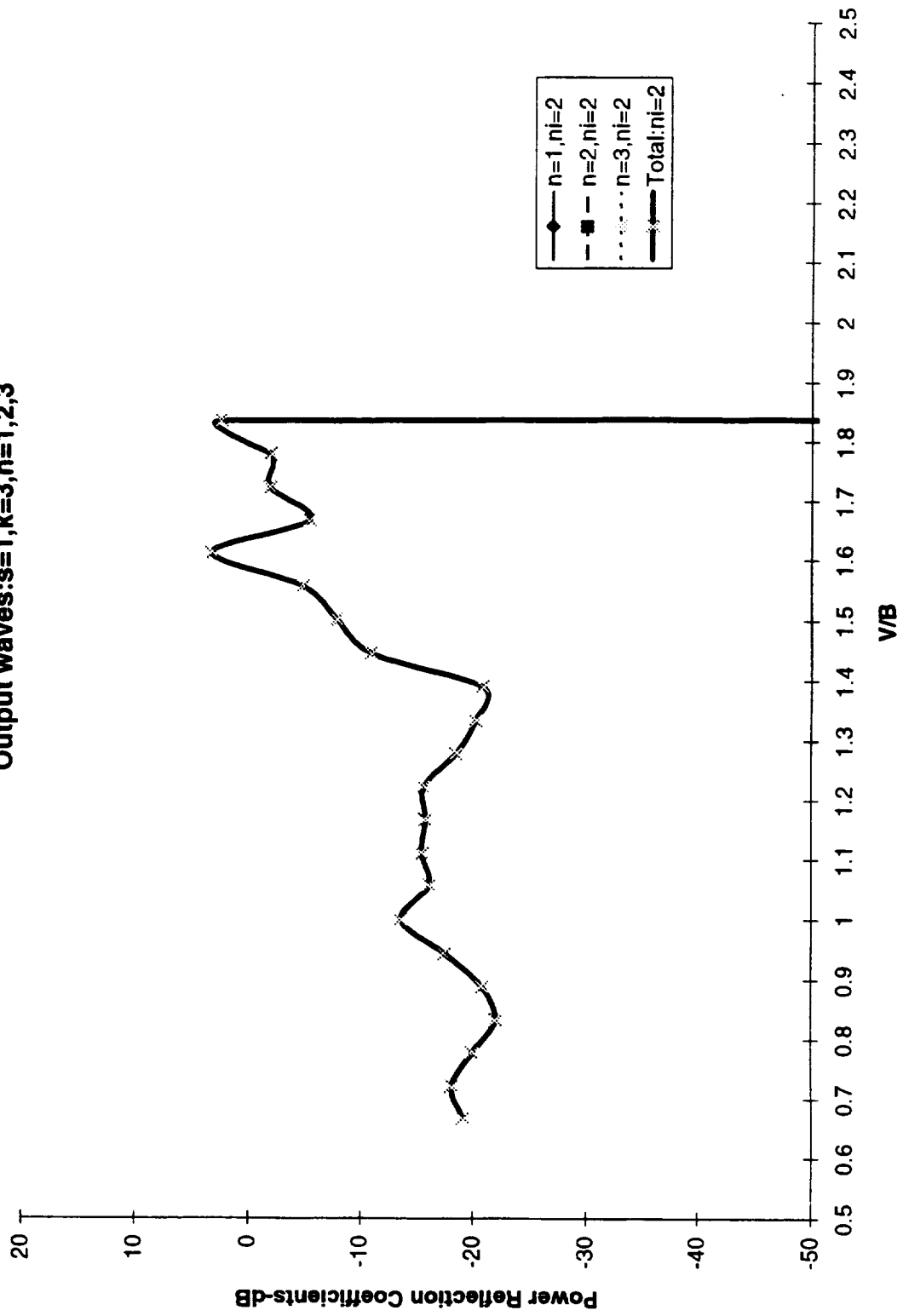
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

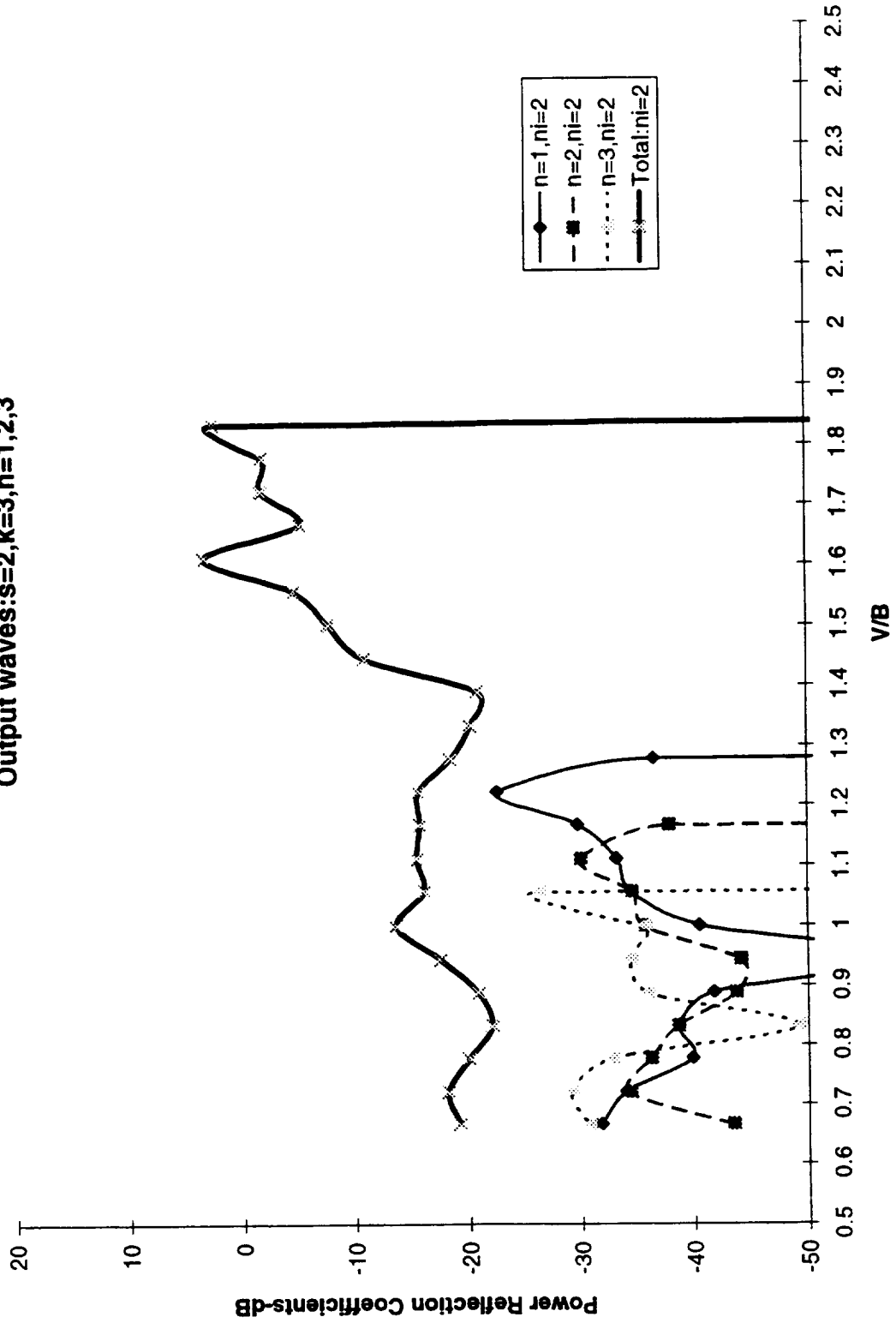
Output waves: $s=1, k=3, n=1, 2, 3$



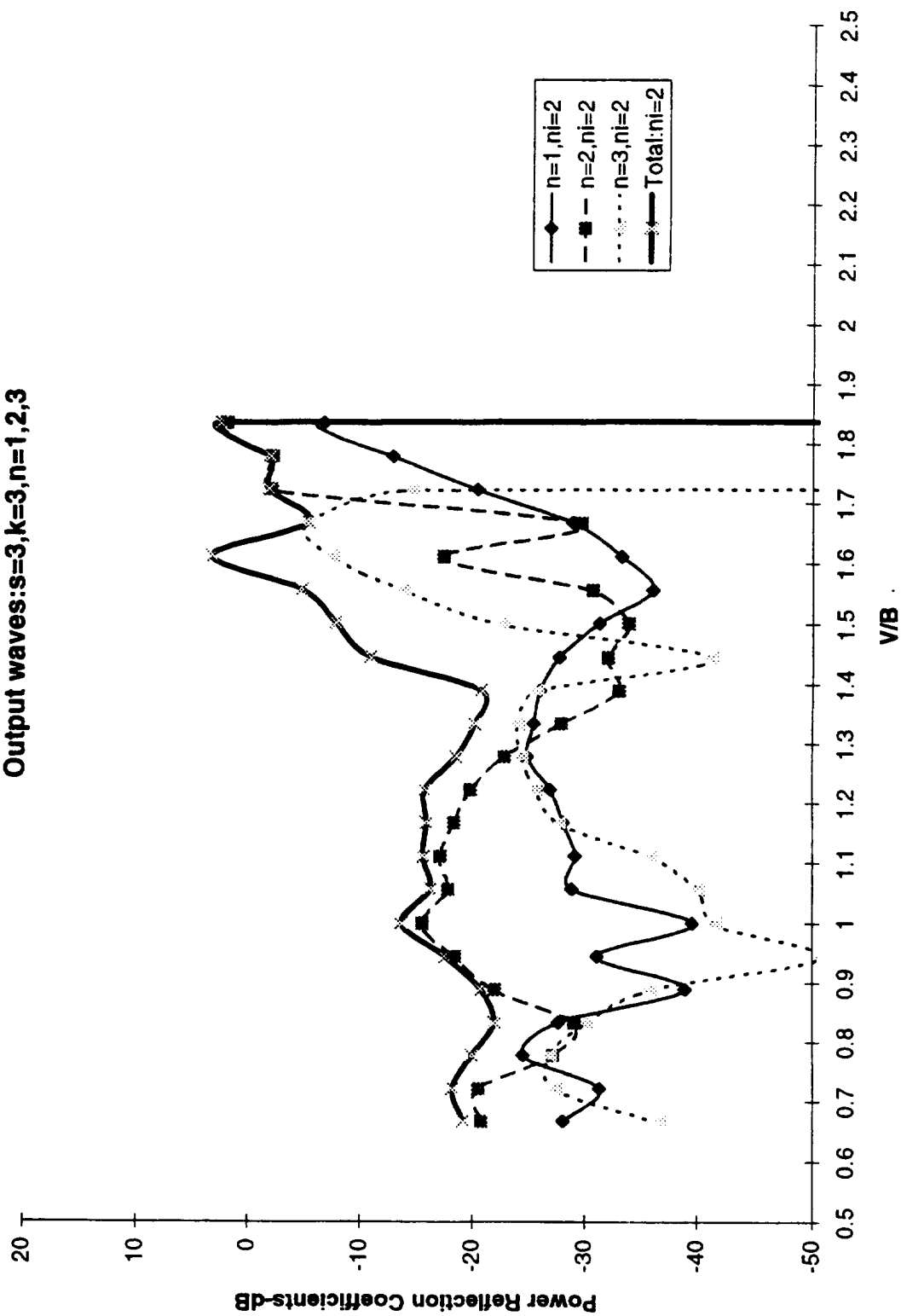
Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

Output waves: $s=2, k=3, n=1, 2, 3$



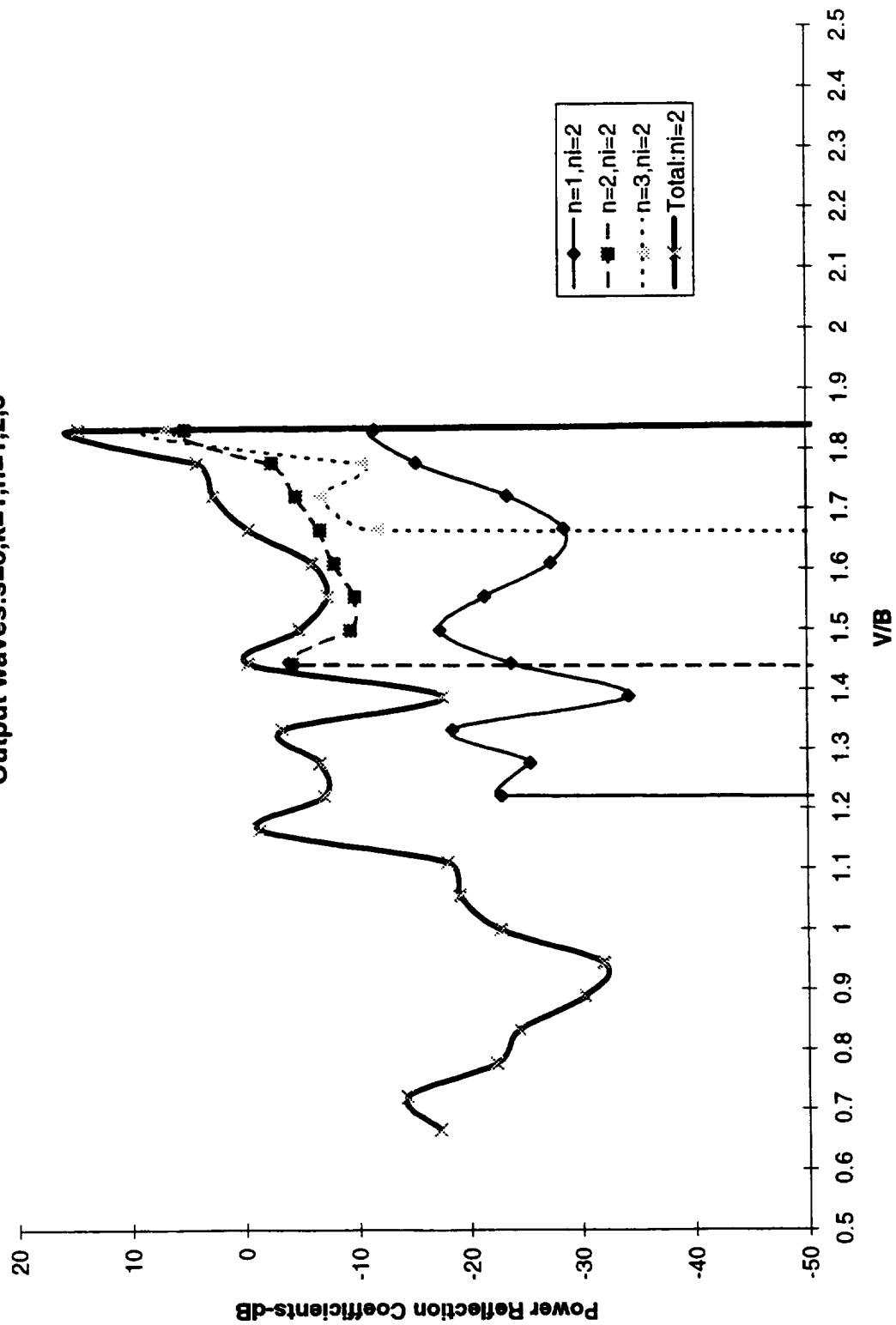
Rotor Reflection-High Speed Case
Input wave: $s_i=3, k_i=3, n_i=2$
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

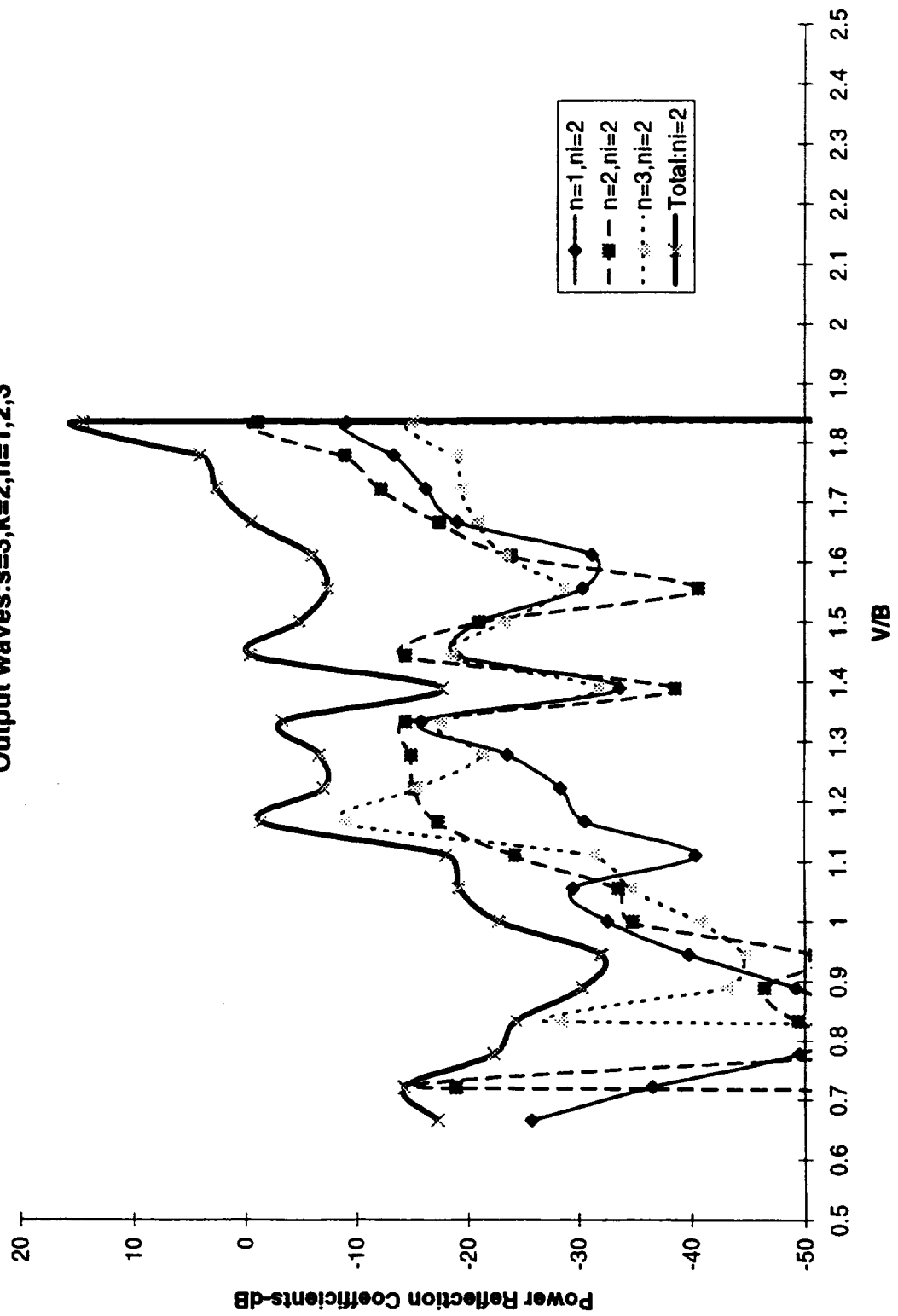
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_l=3, k_l=3, n_l=2$

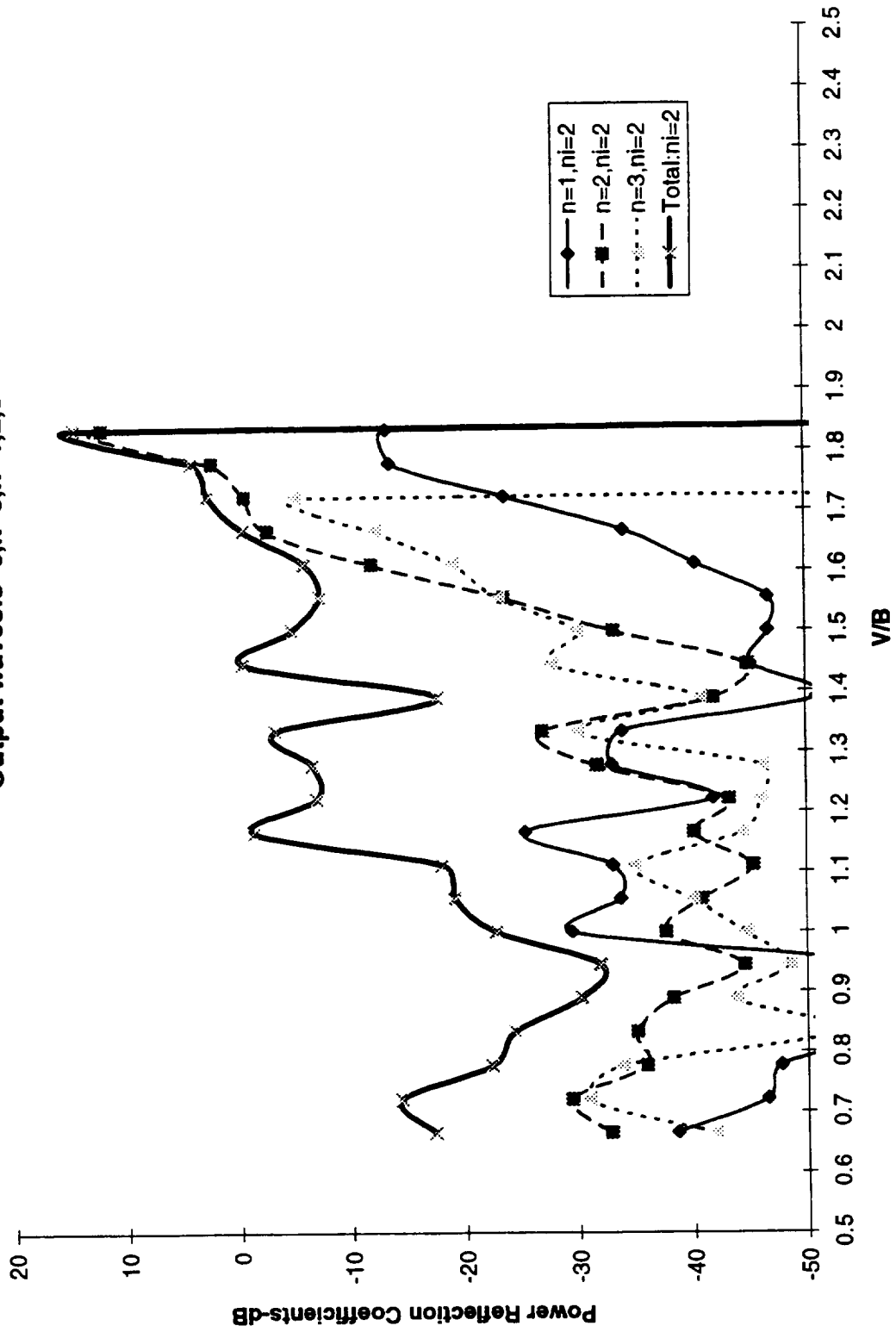
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

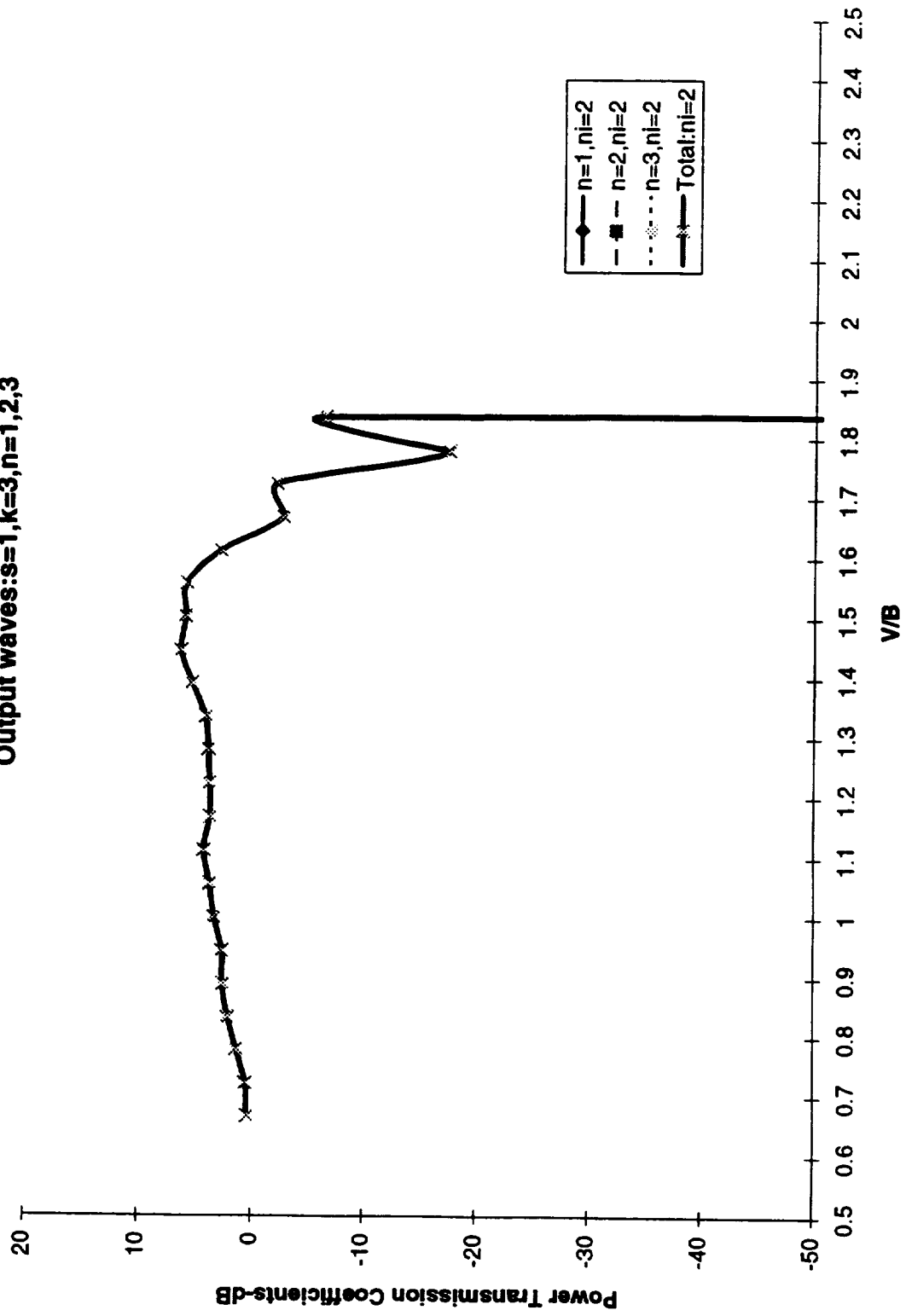
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

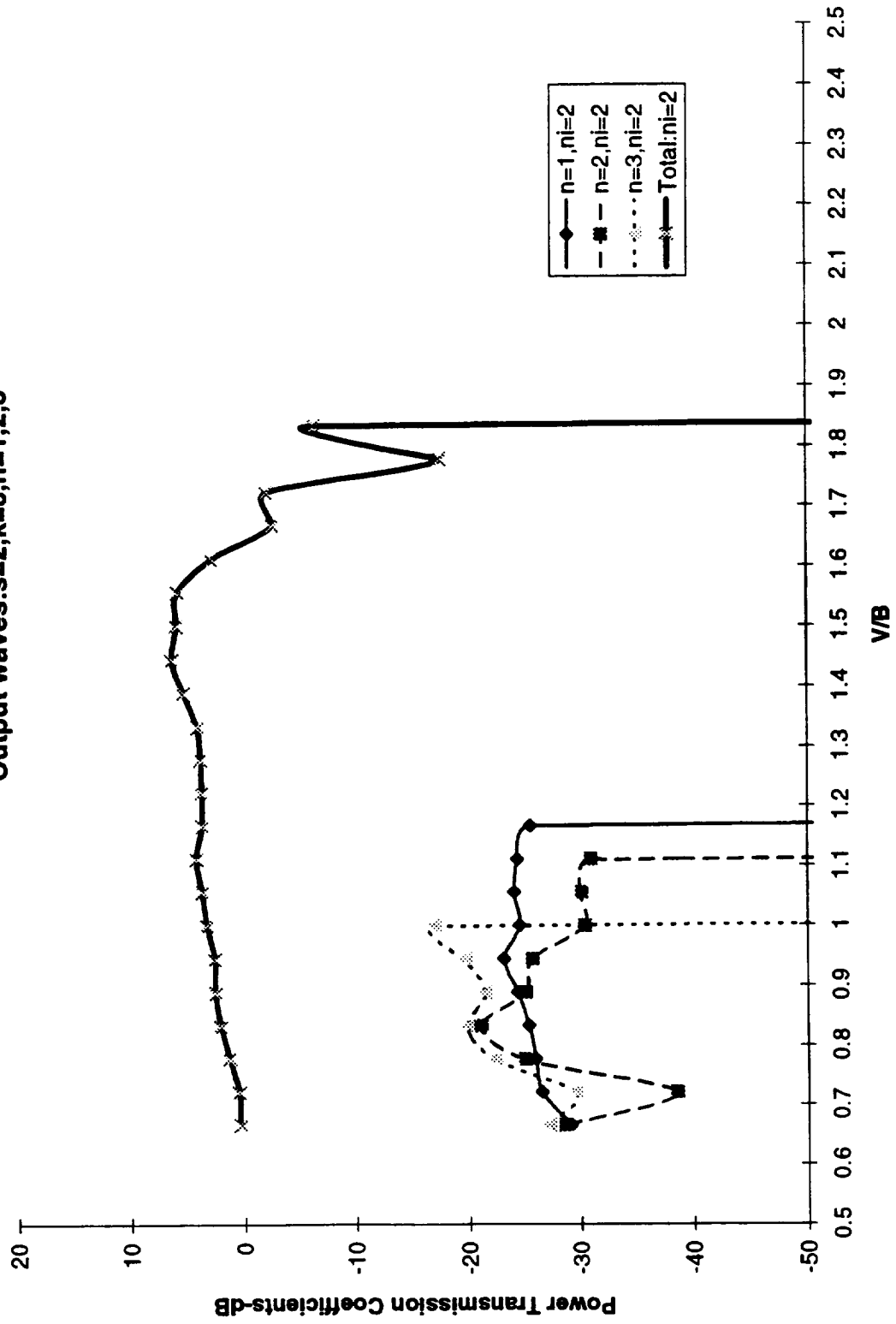
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

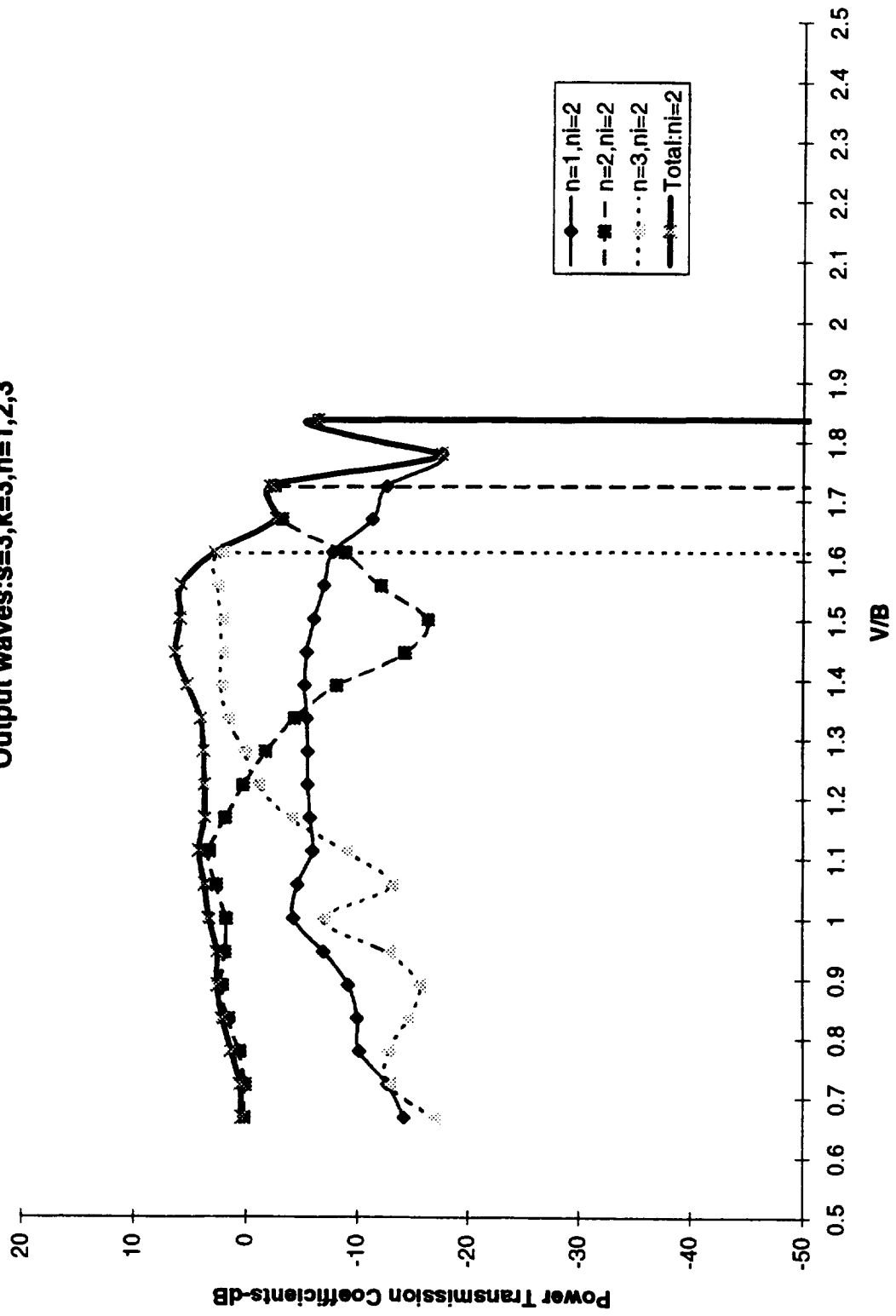
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

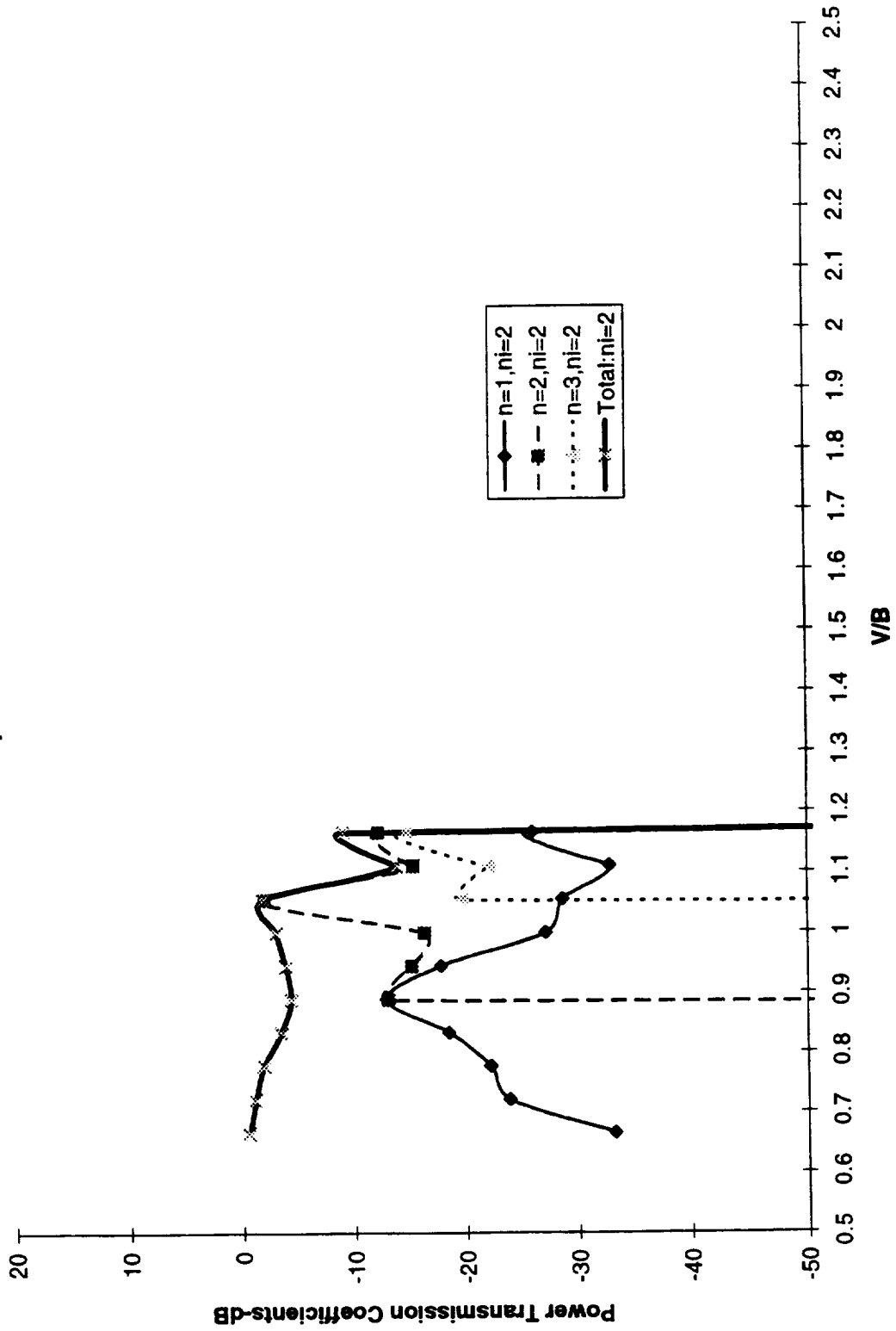
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

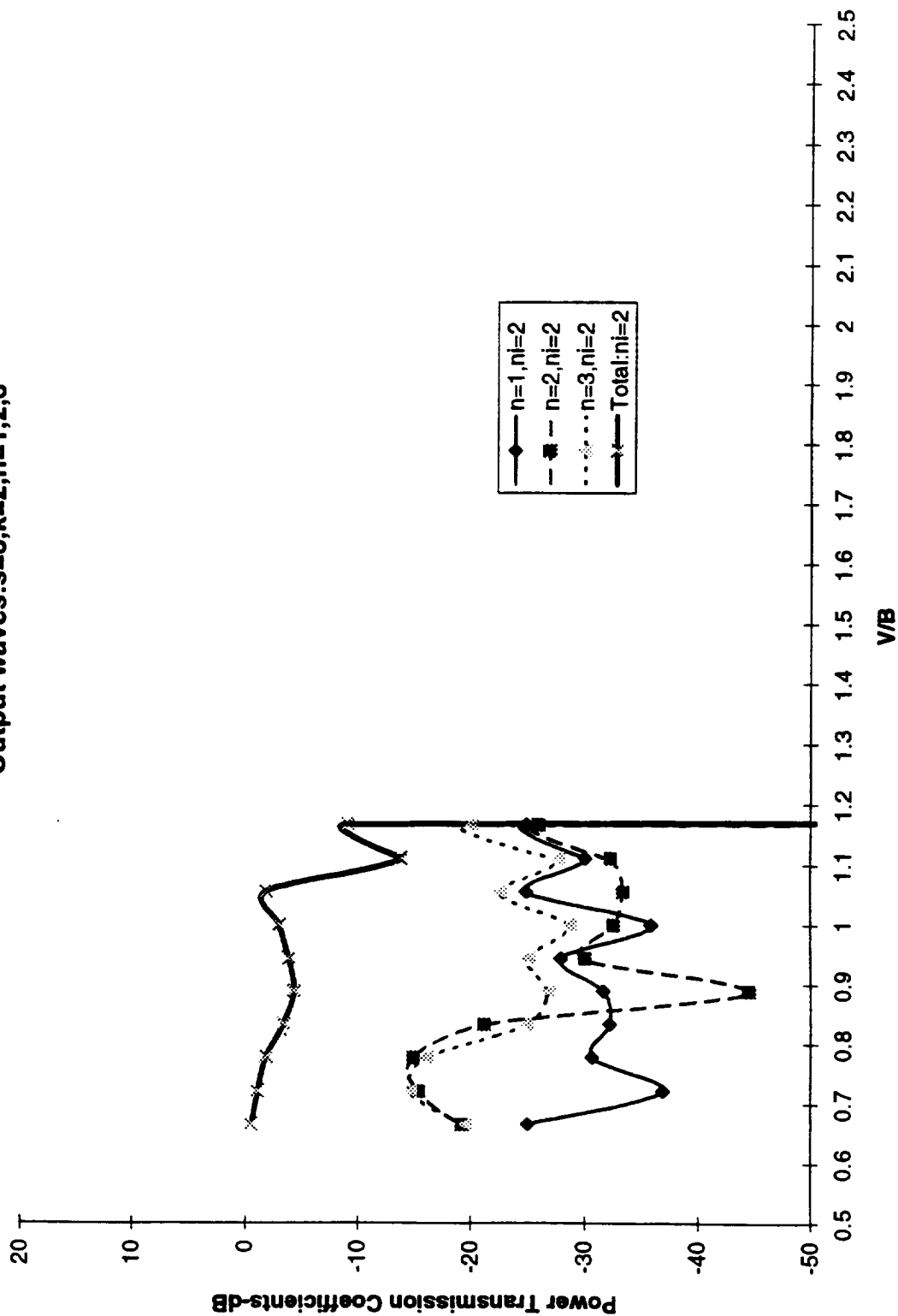
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

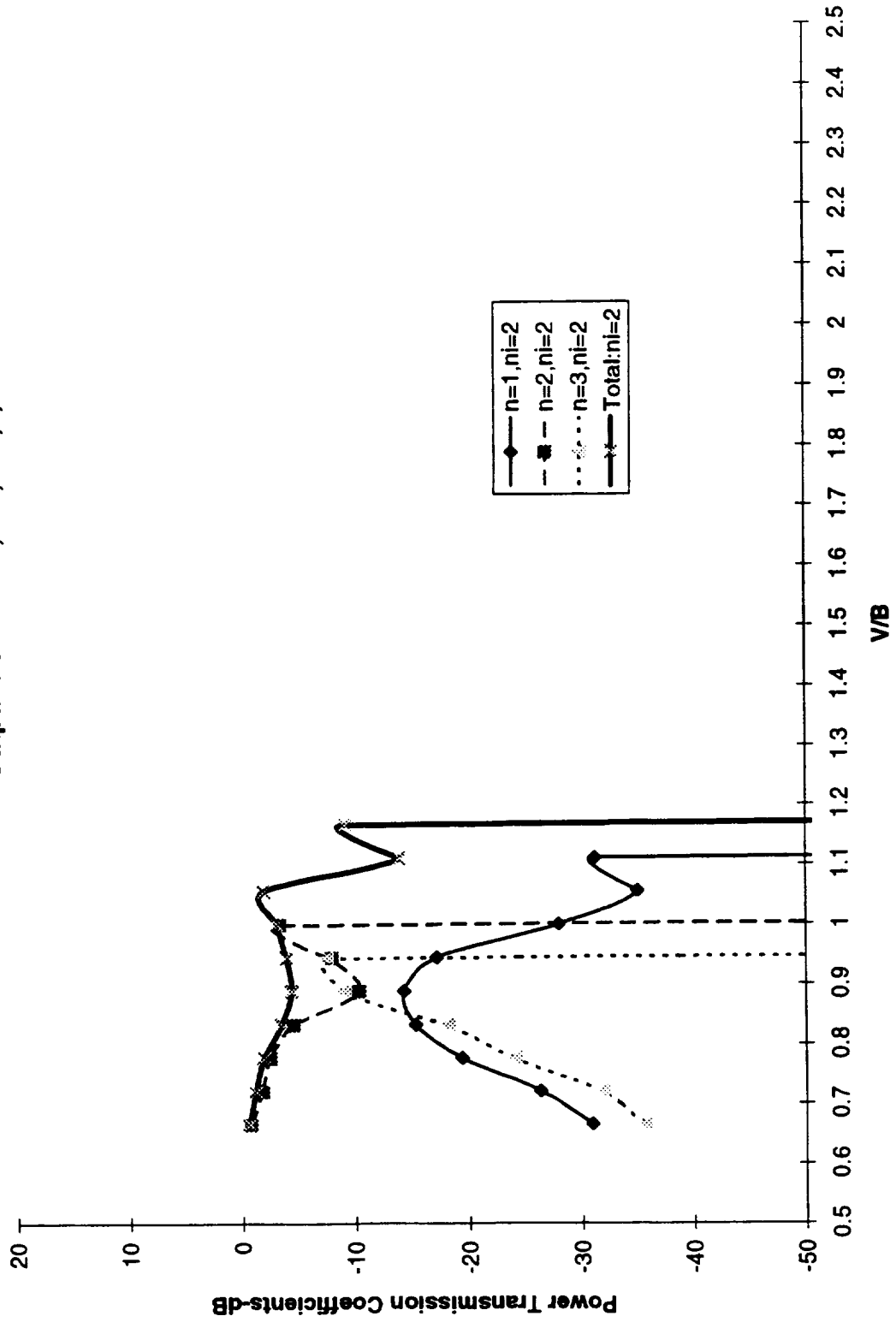
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

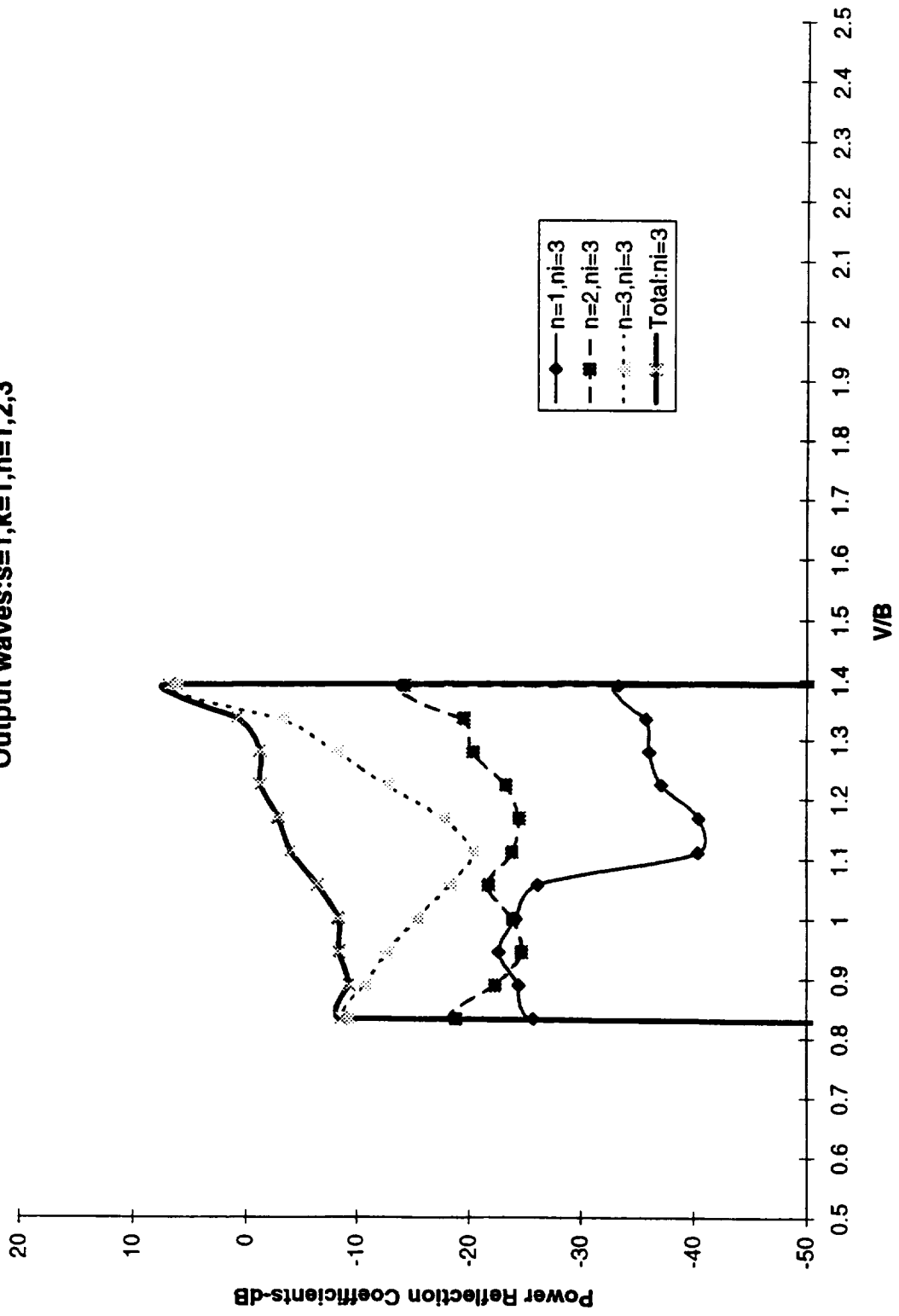
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

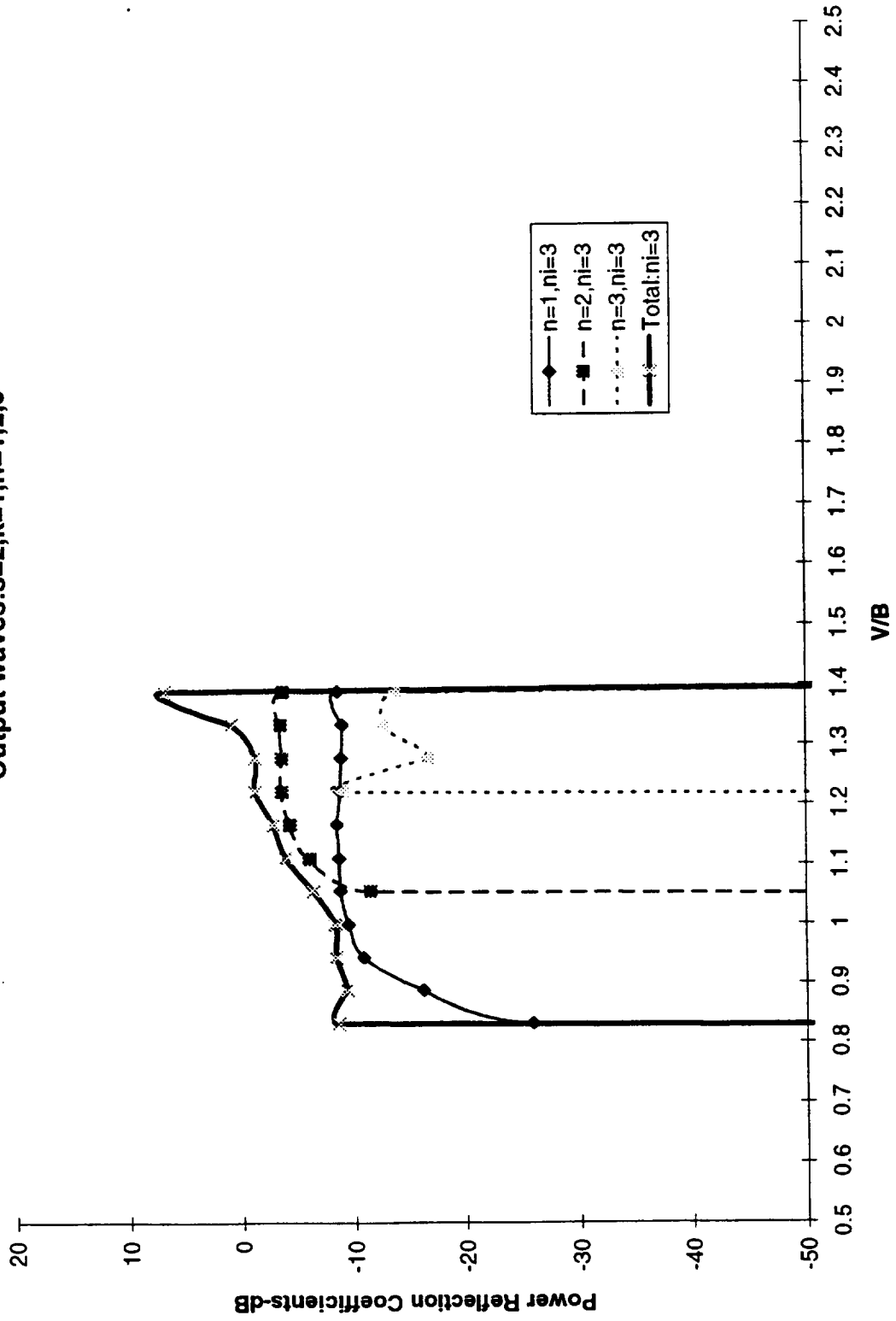
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

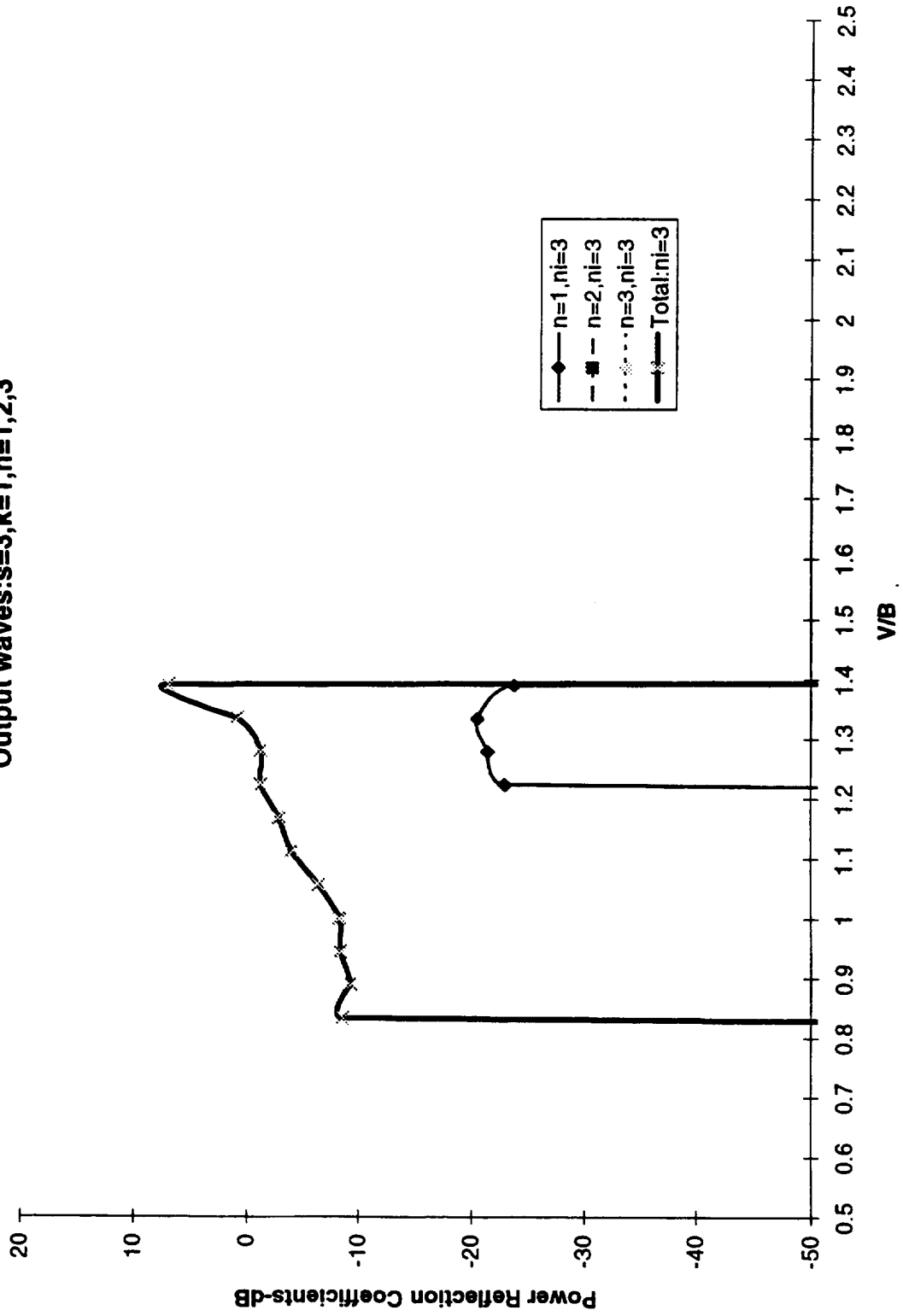
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

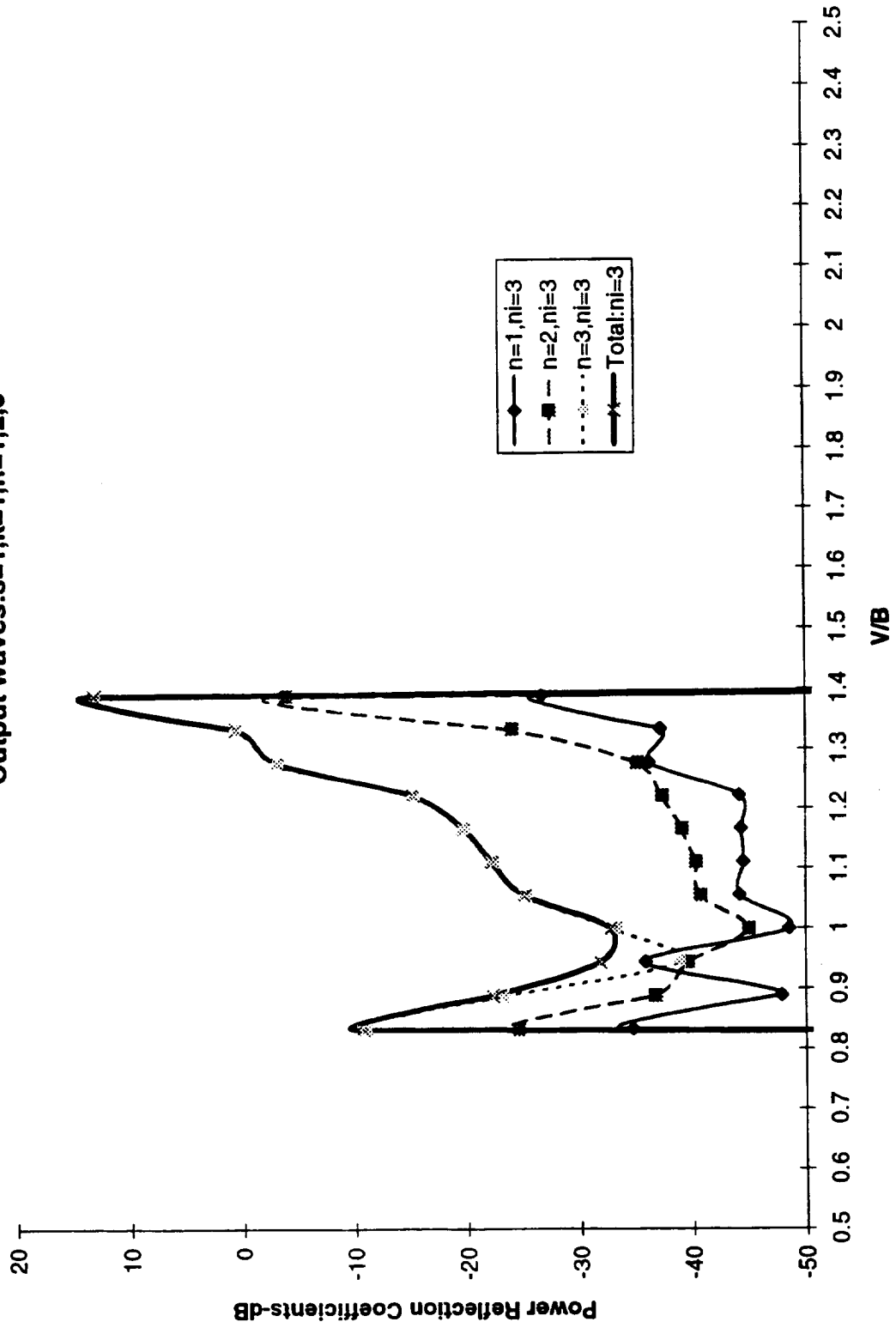
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

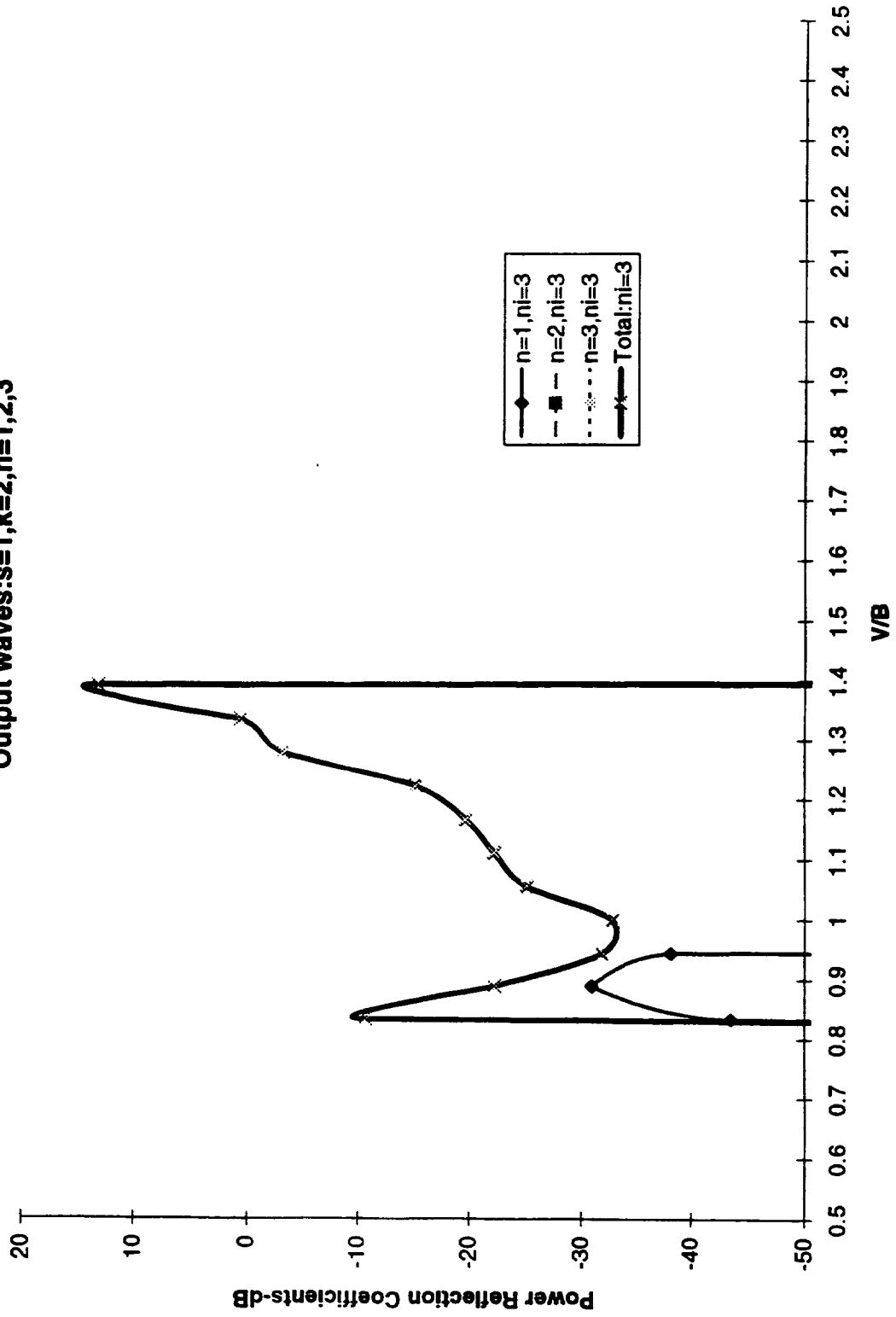
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_l=1, k_l=1, n_l=3$

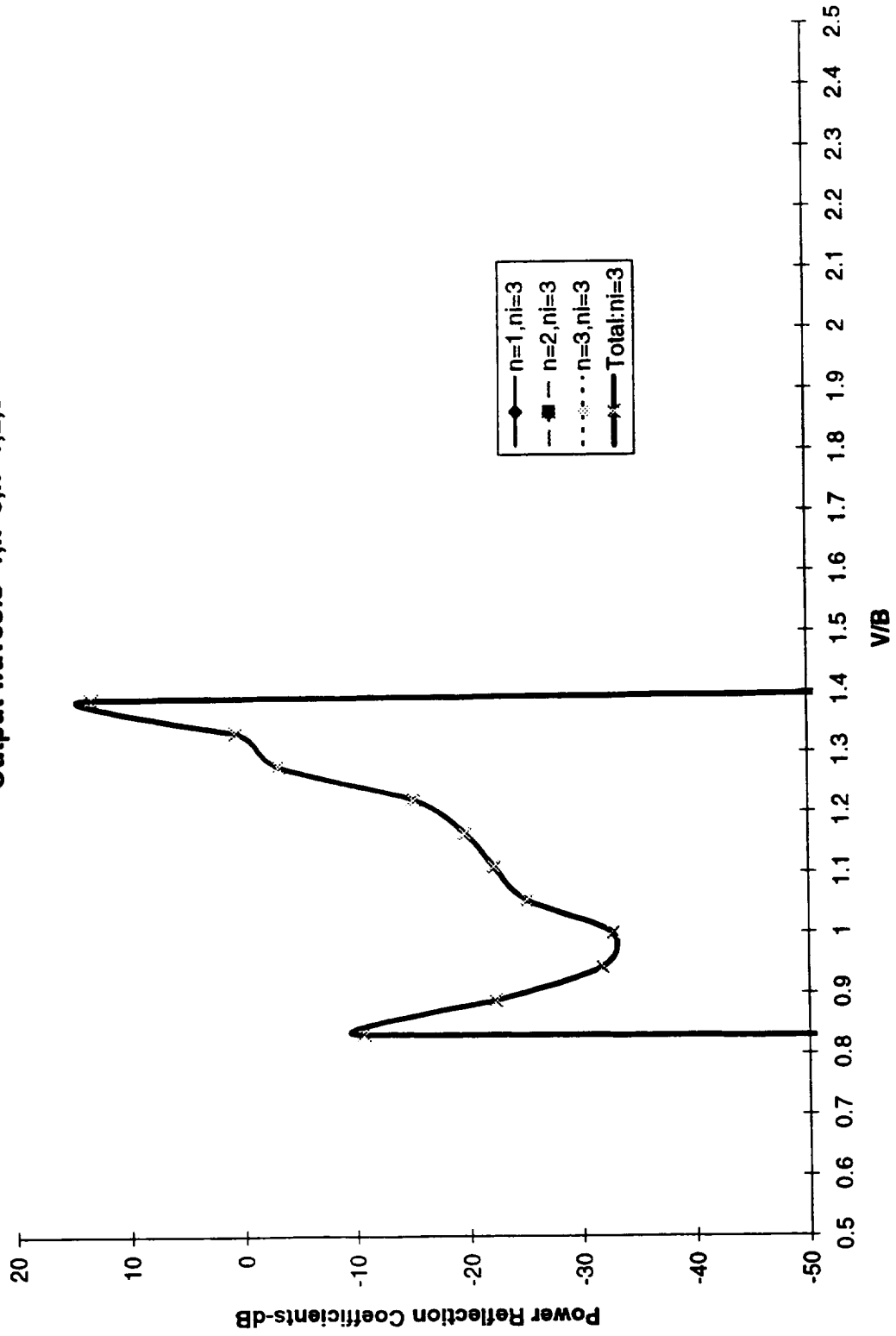
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

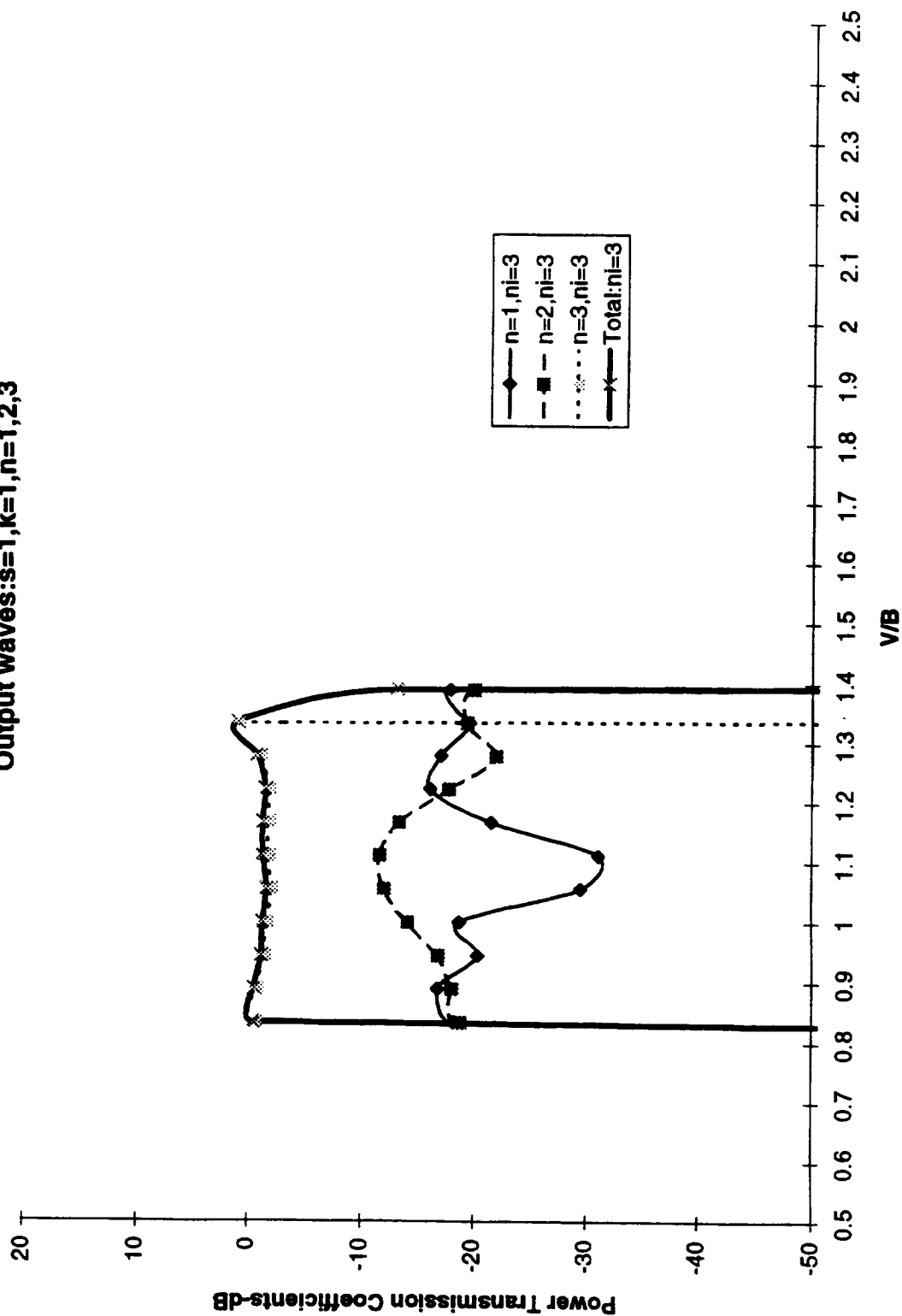
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

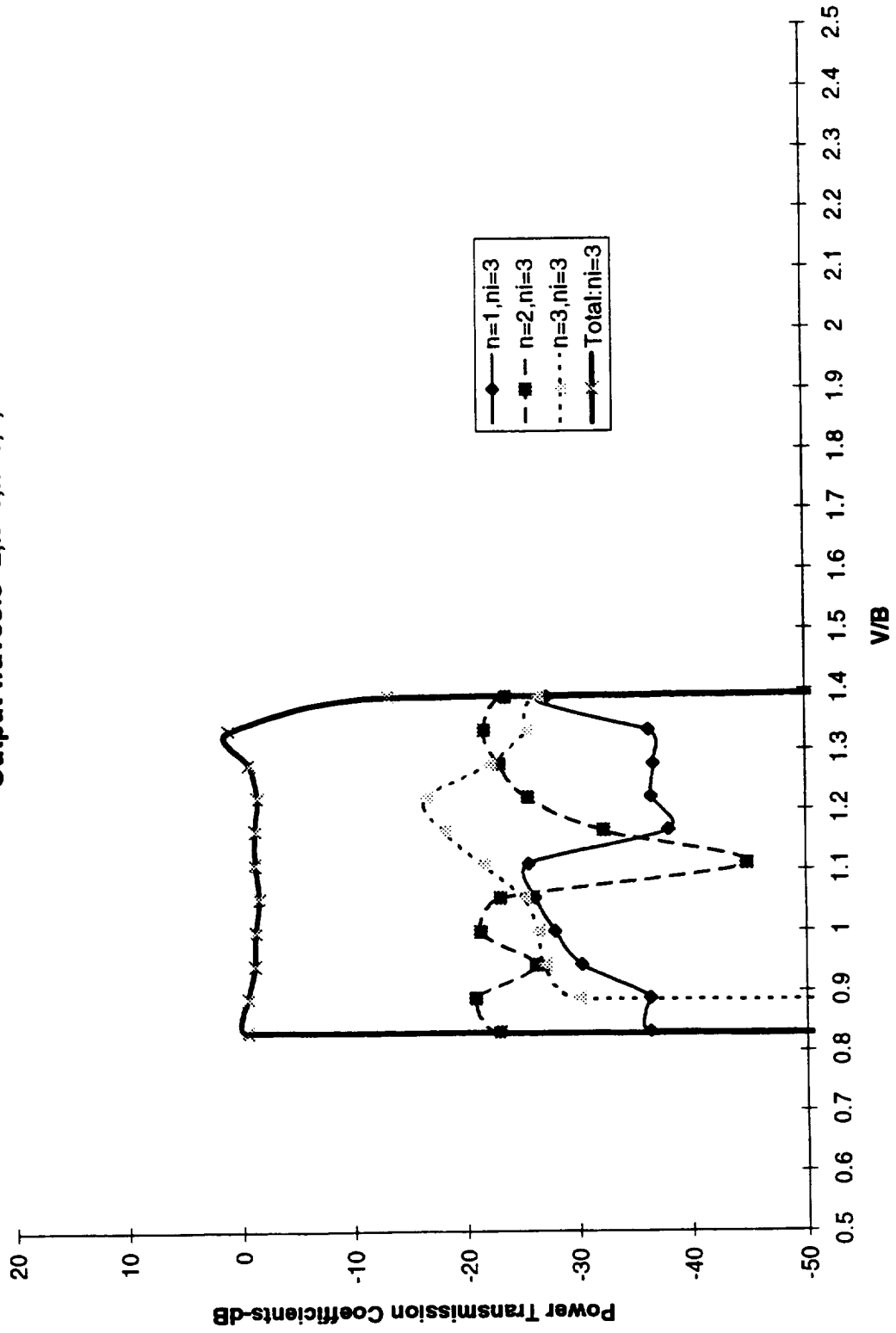
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

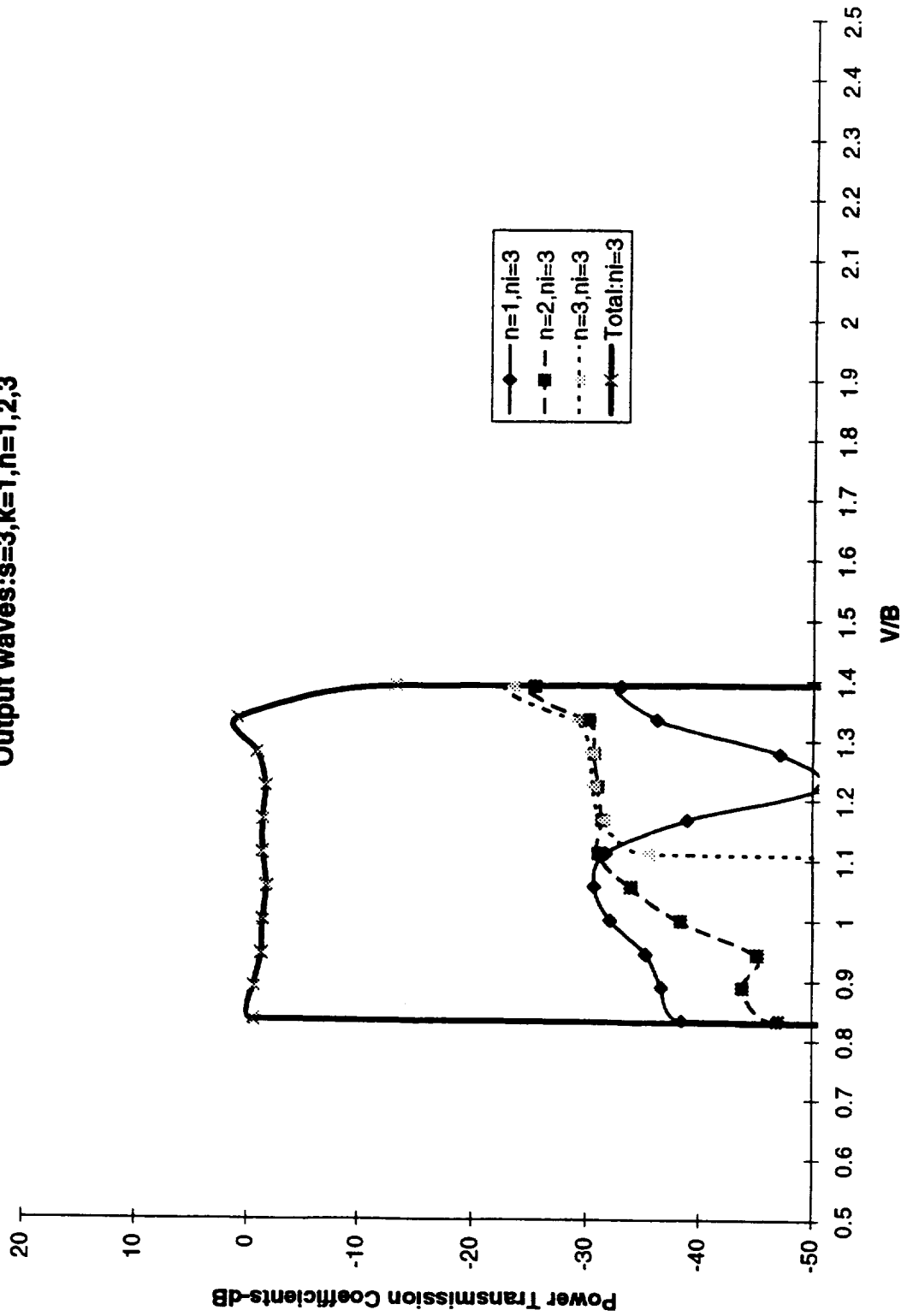
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

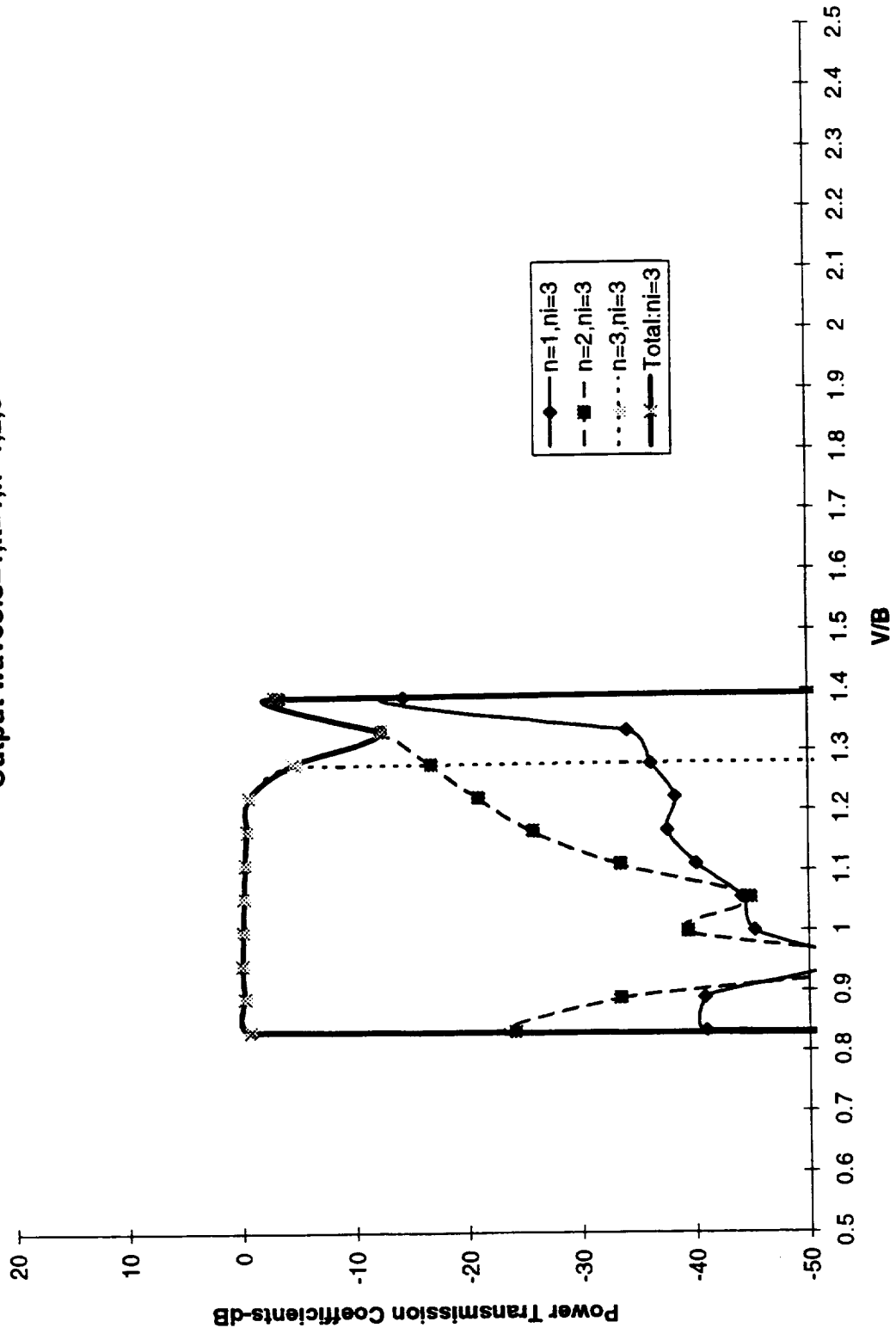
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

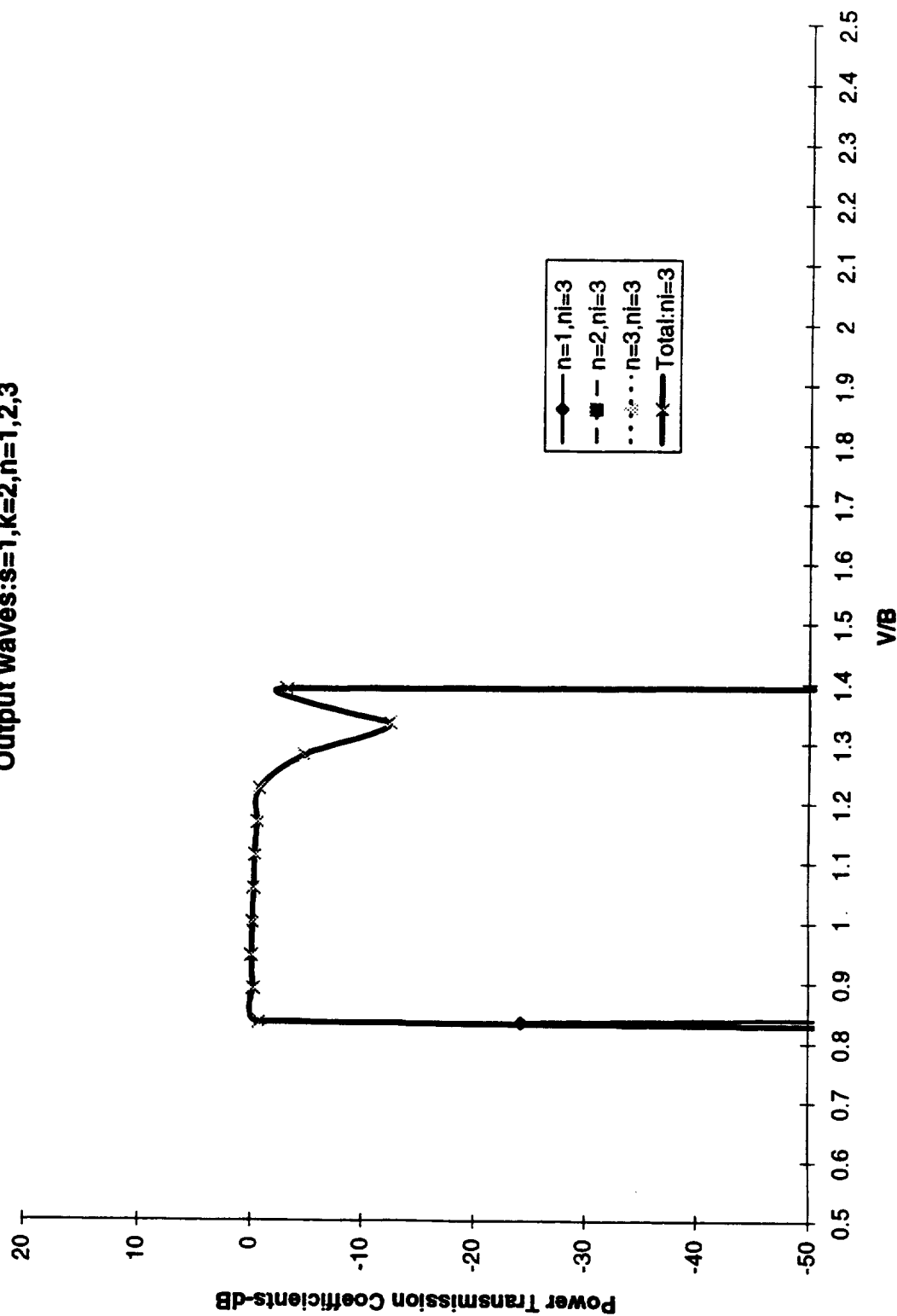
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

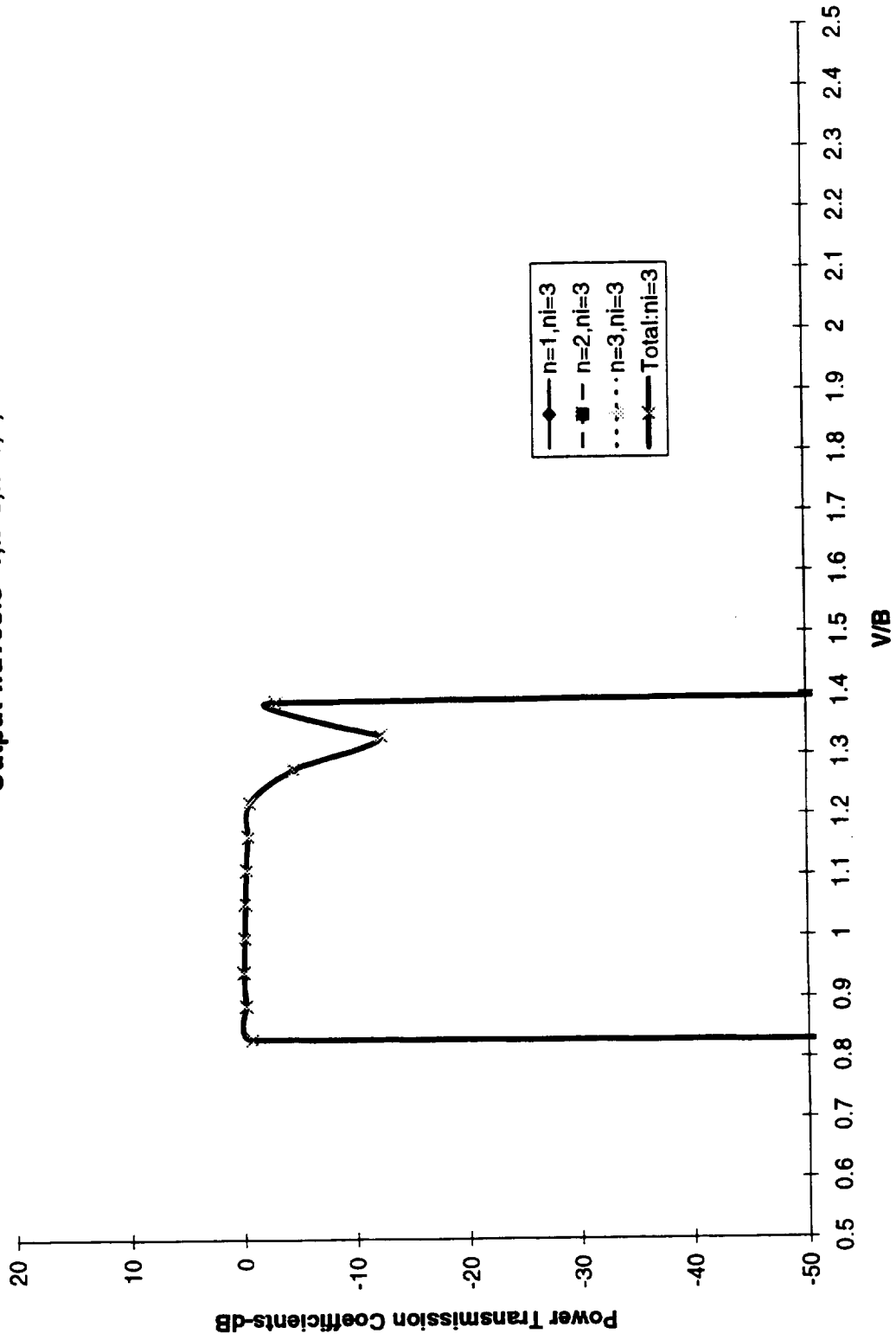
Output waves: $s=1, k=2, n=1, 2, 3$



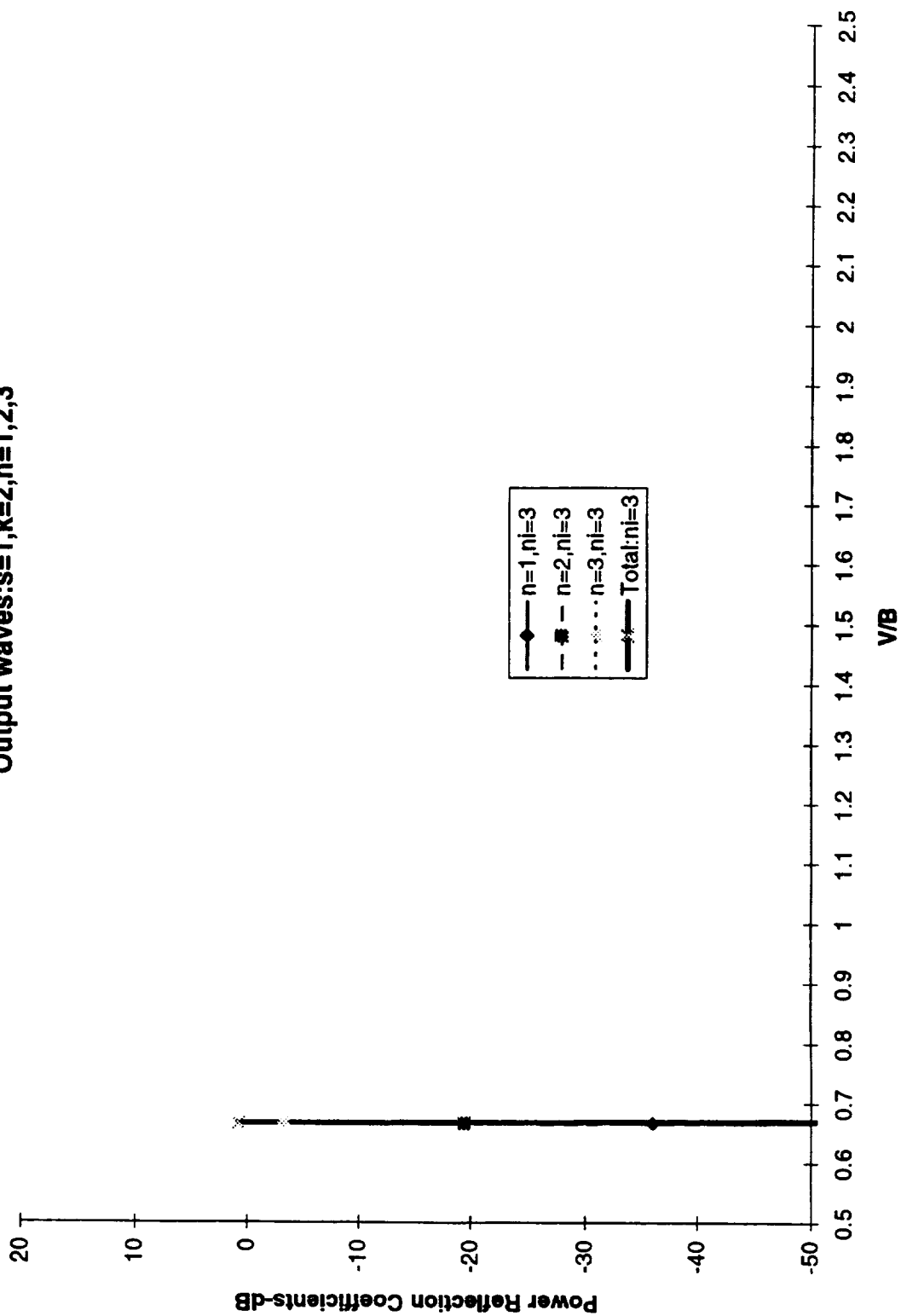
Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

Output waves: $s=1, k=3, n=1, 2, 3$



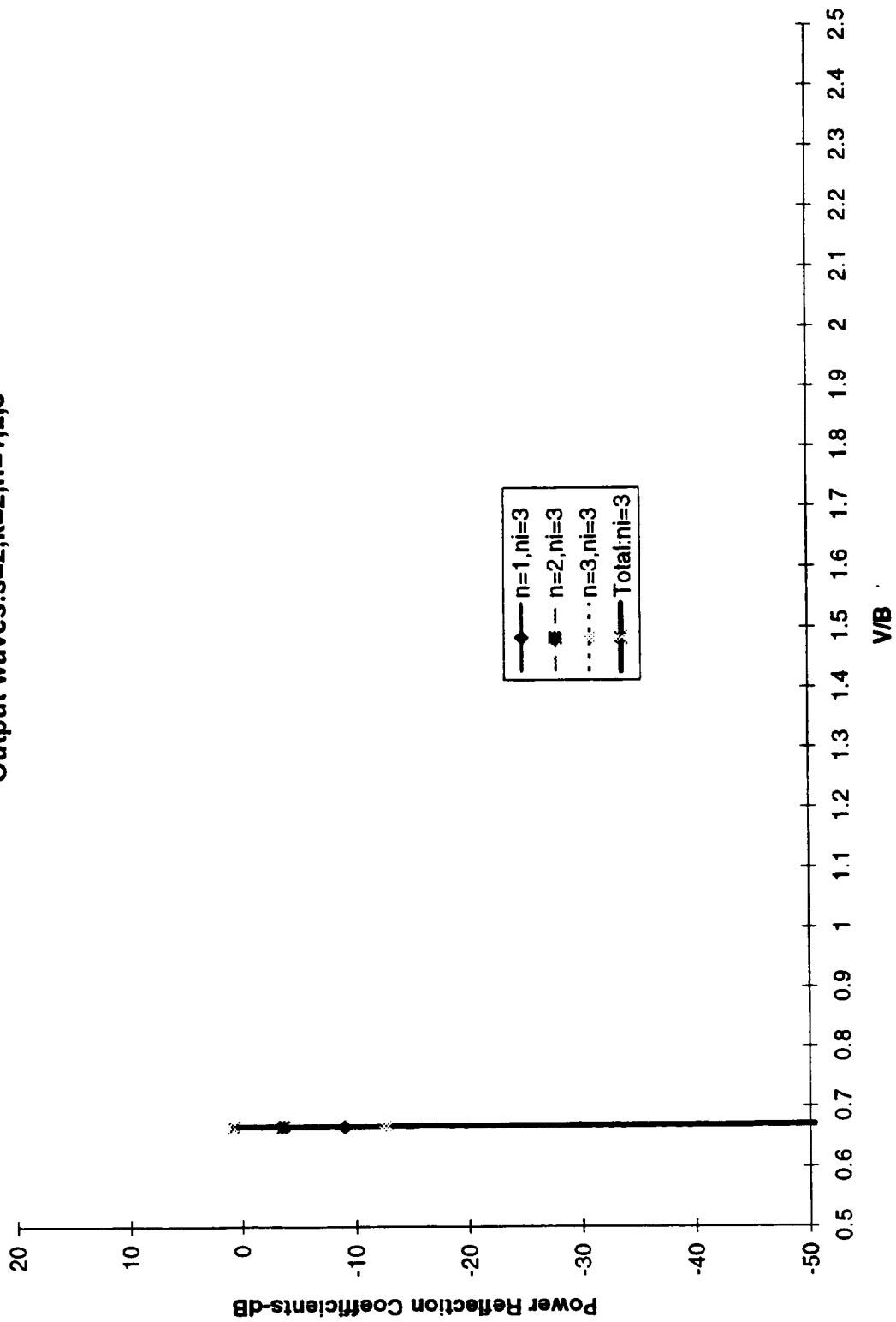
Rotor Reflection-High Speed Case
Input wave: $s_i=1, k_i=2, n_i=3$
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=3$

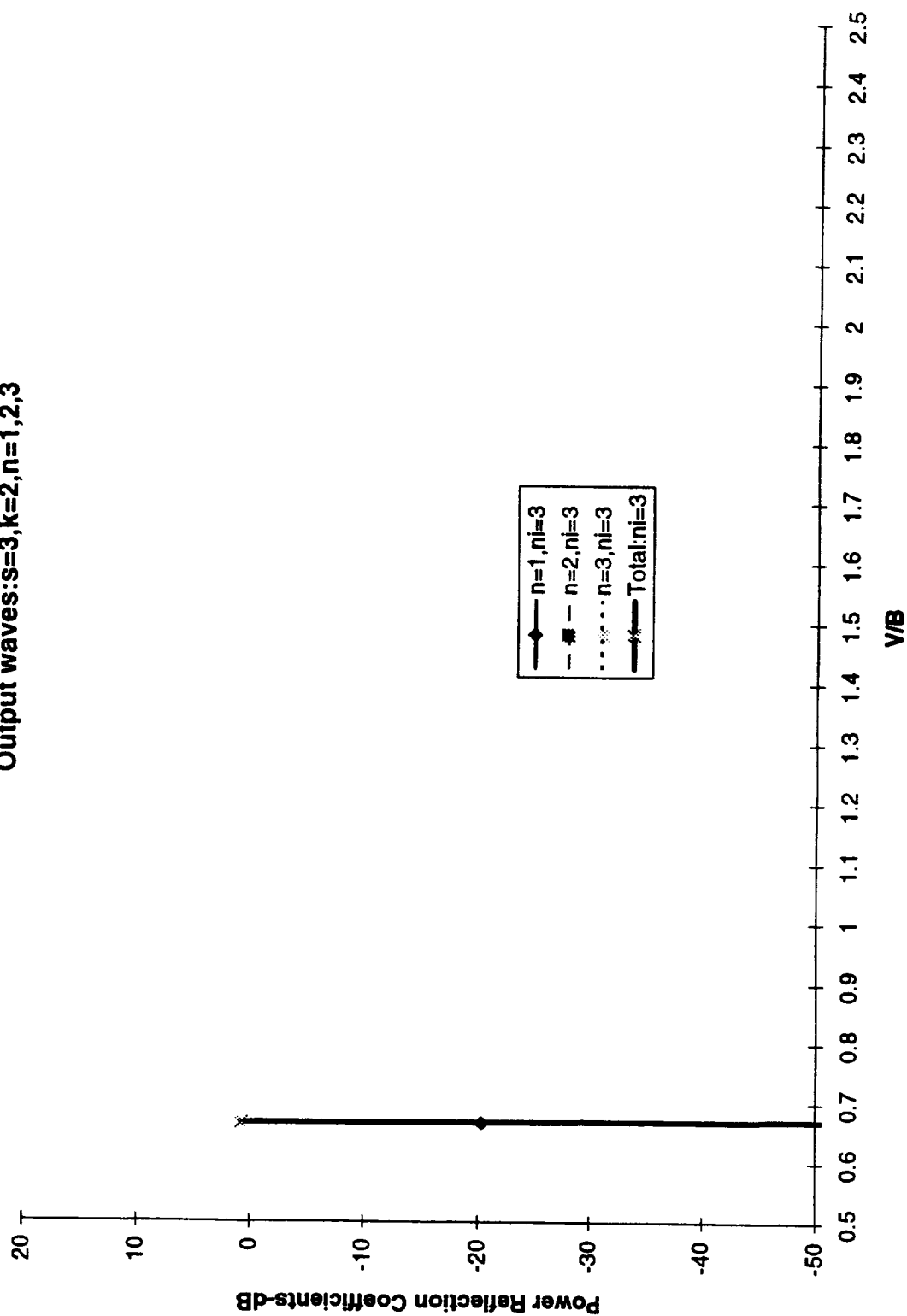
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_l=2, n_l=3$

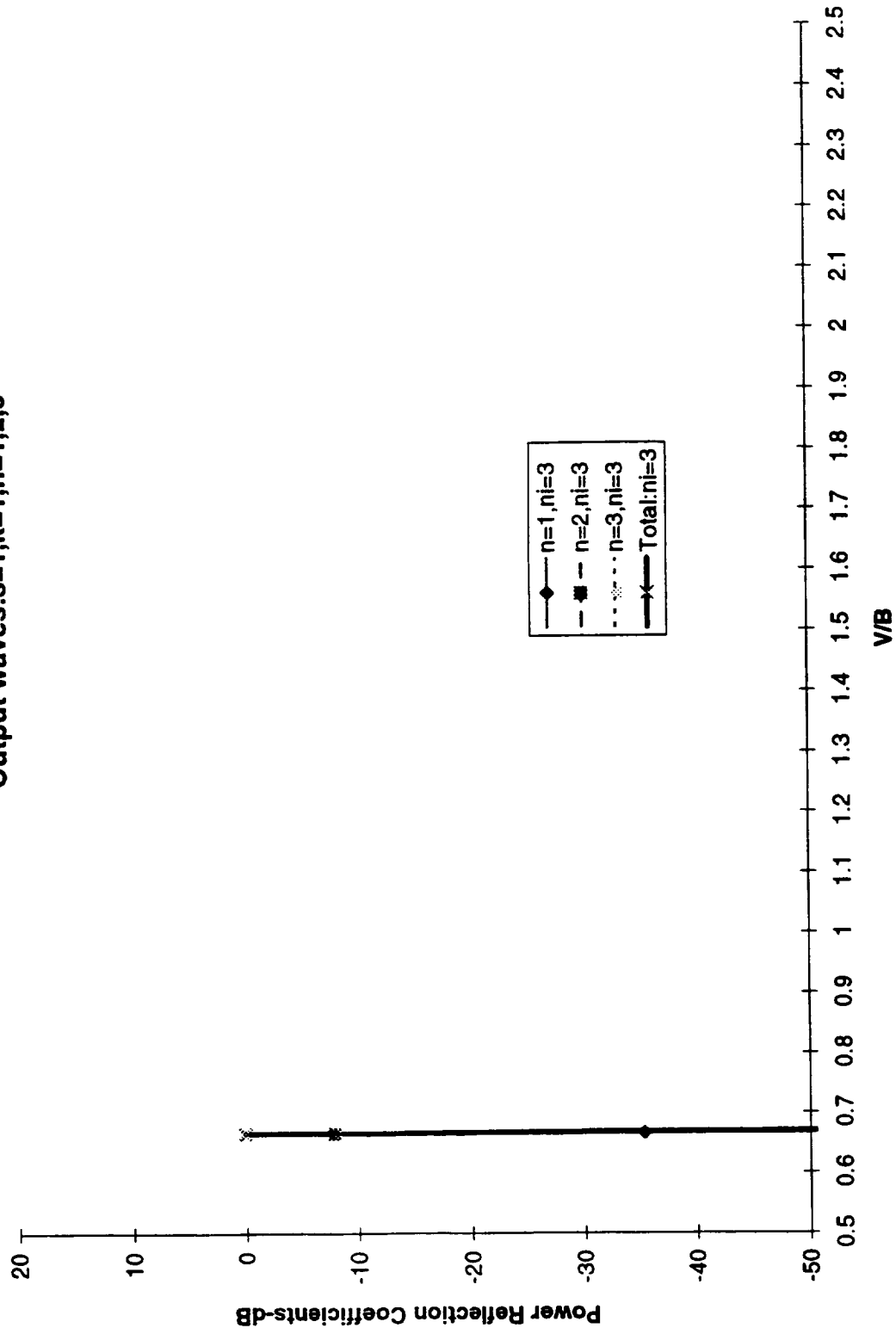
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=3$

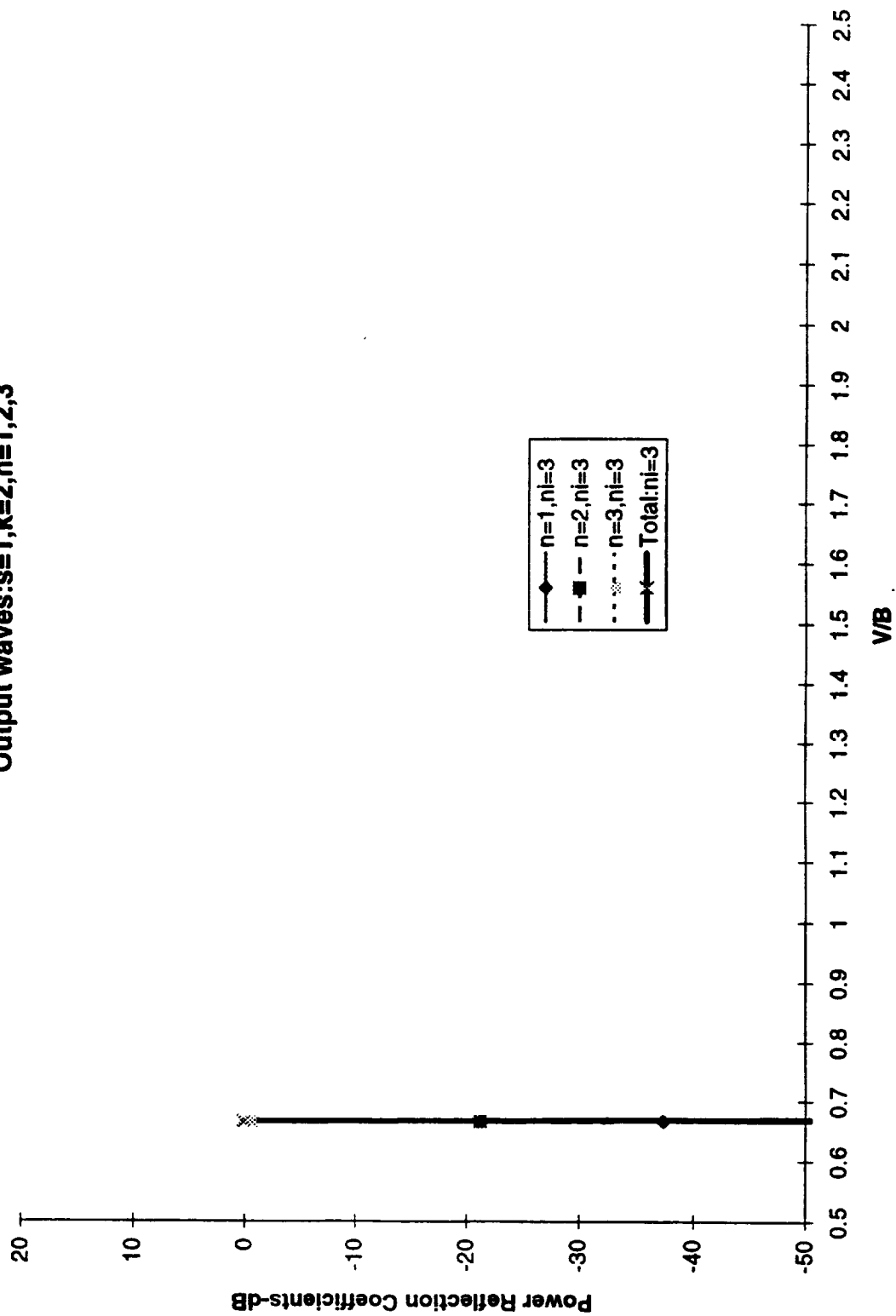
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_l=1, k_l=2, n_l=3$

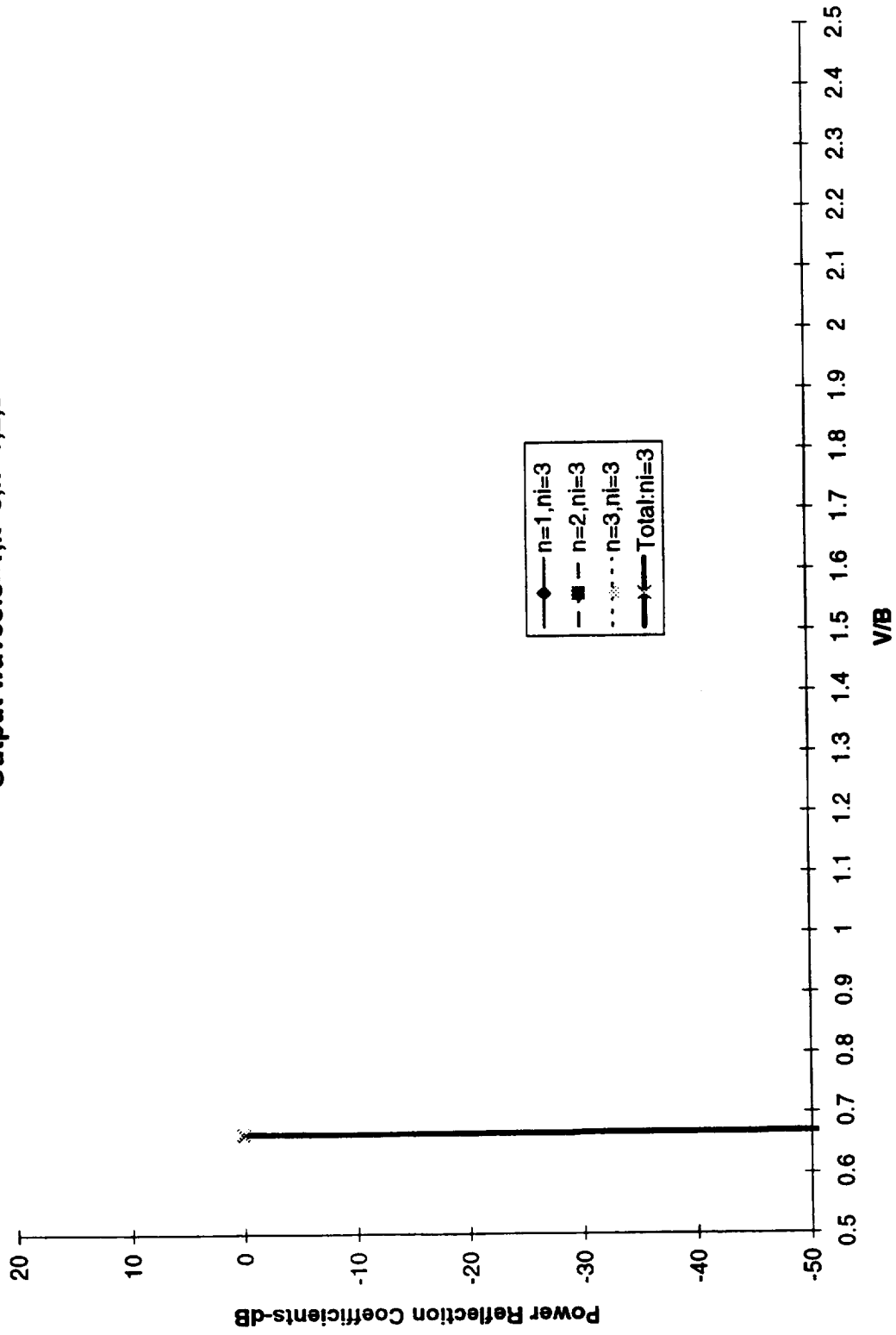
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=3$

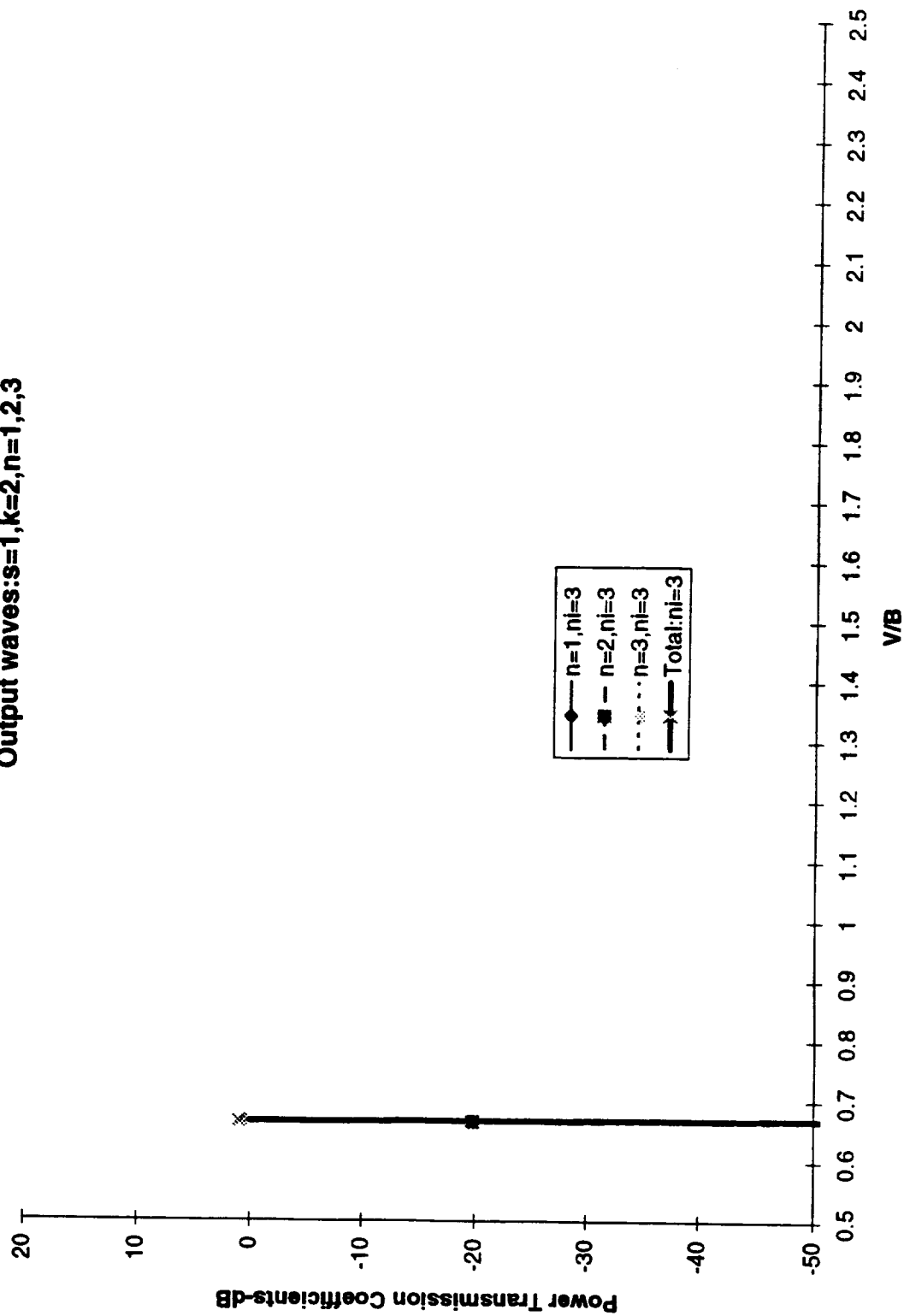
Output wave: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_l=1, k_l=2, n_l=3$

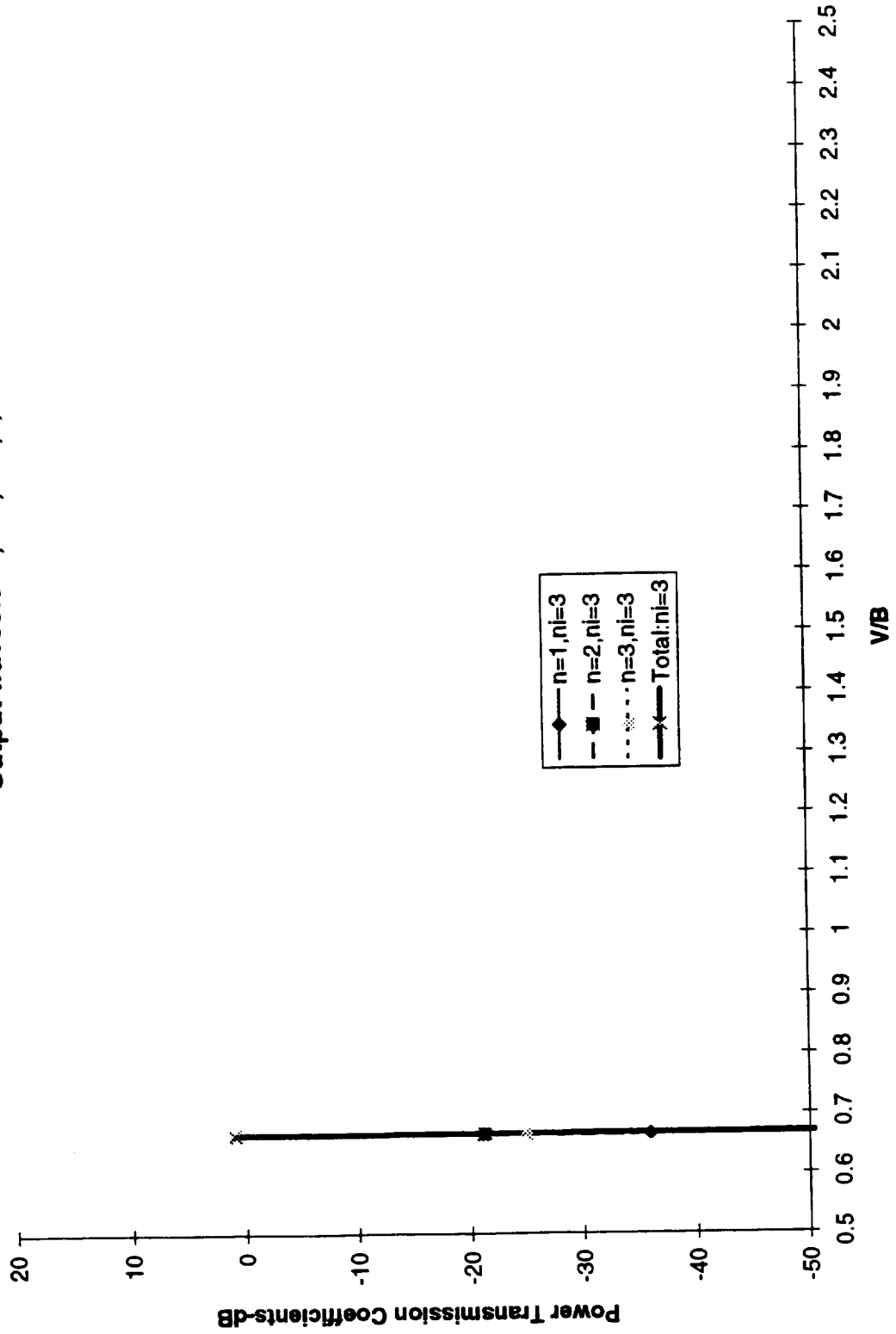
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=3$

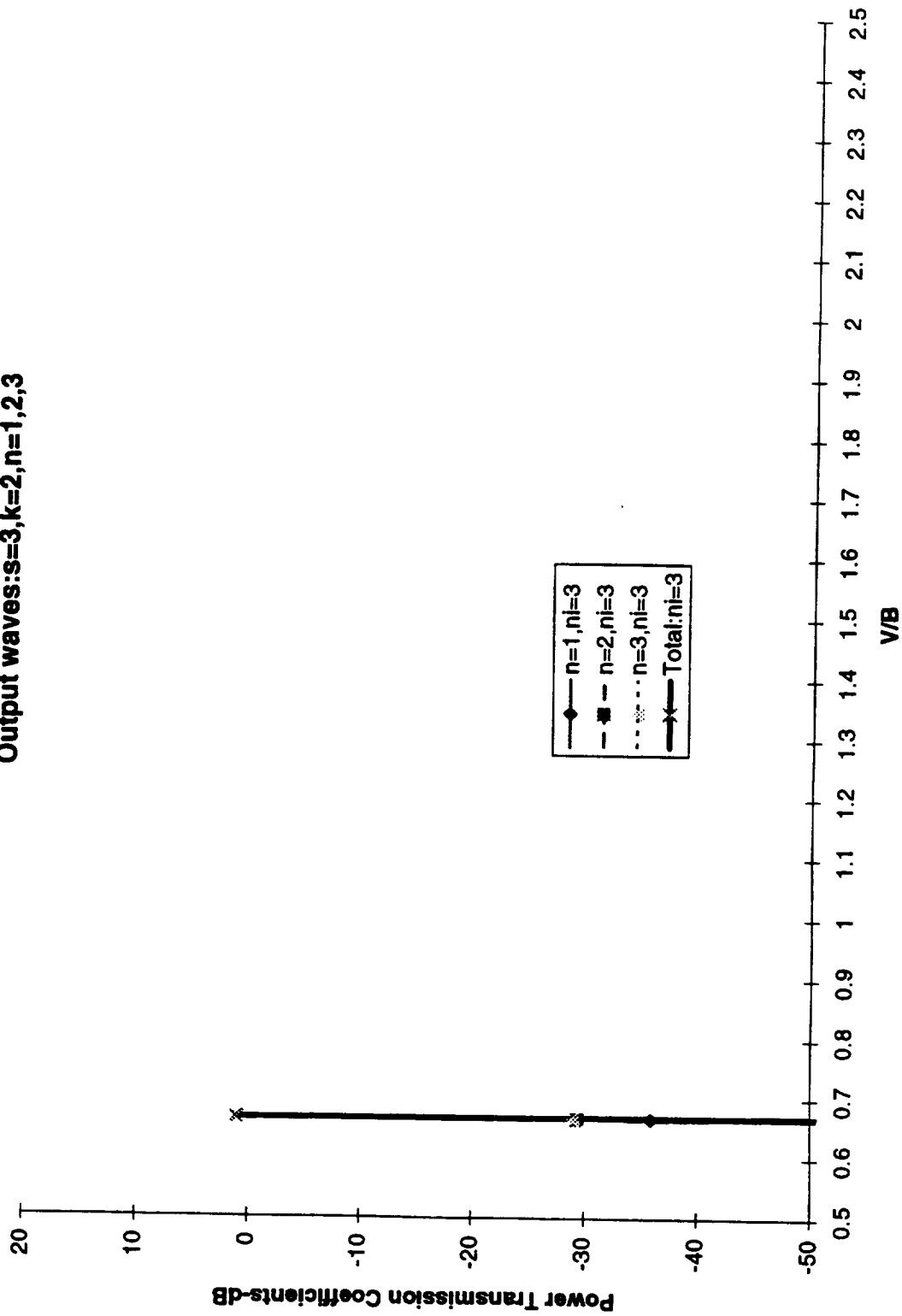
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=3$

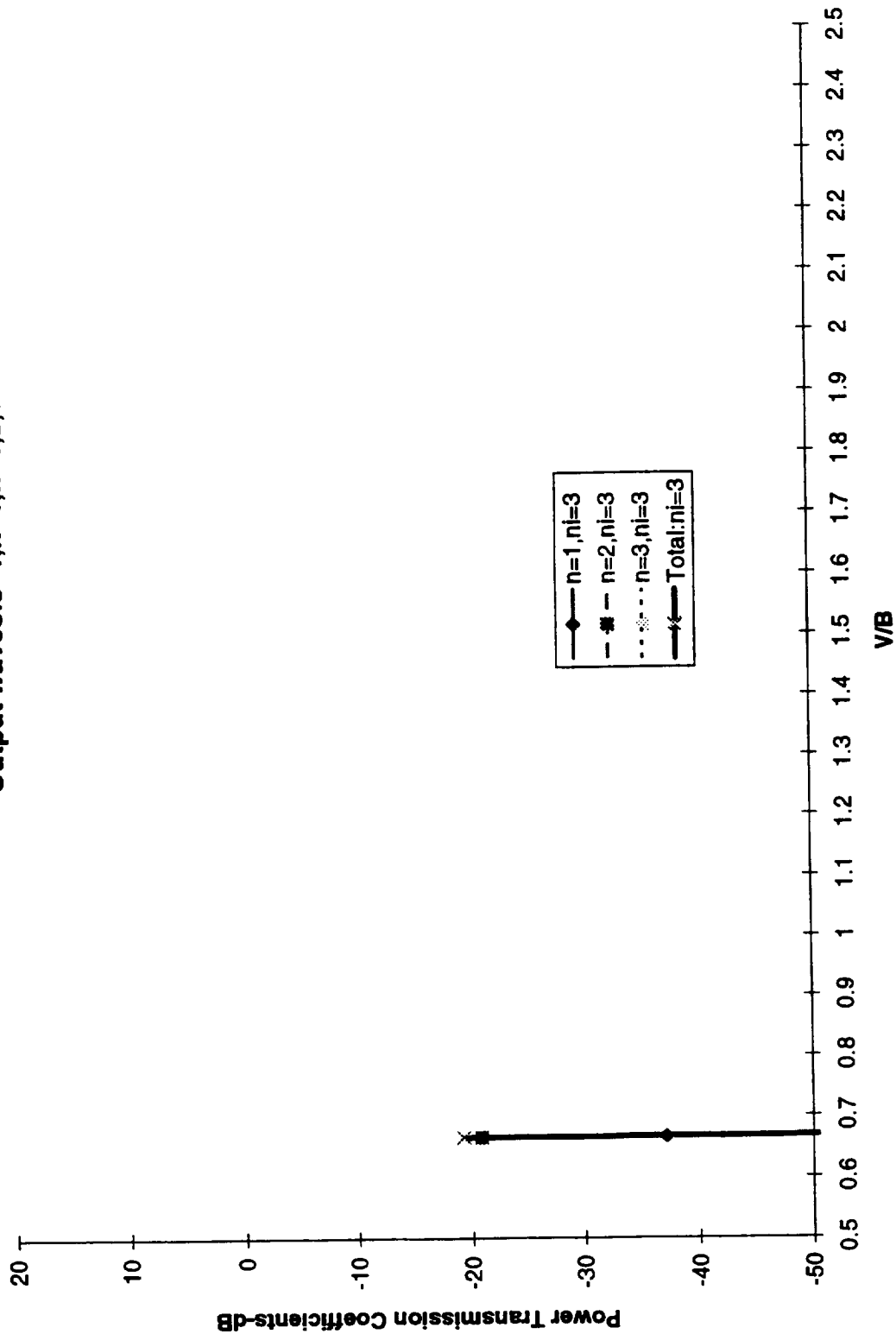
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=3$

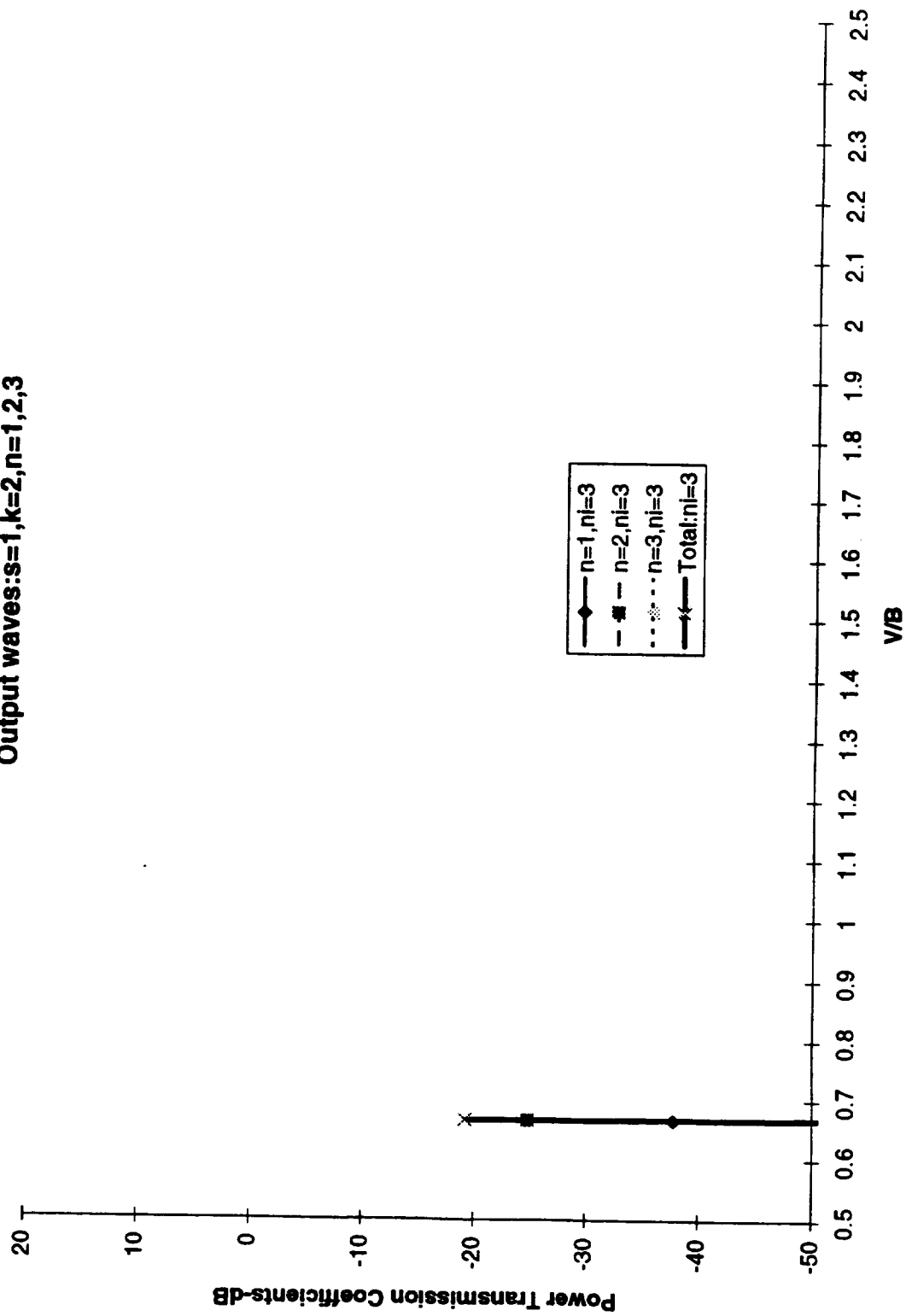
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_l=1, k_l=2, n_l=3$

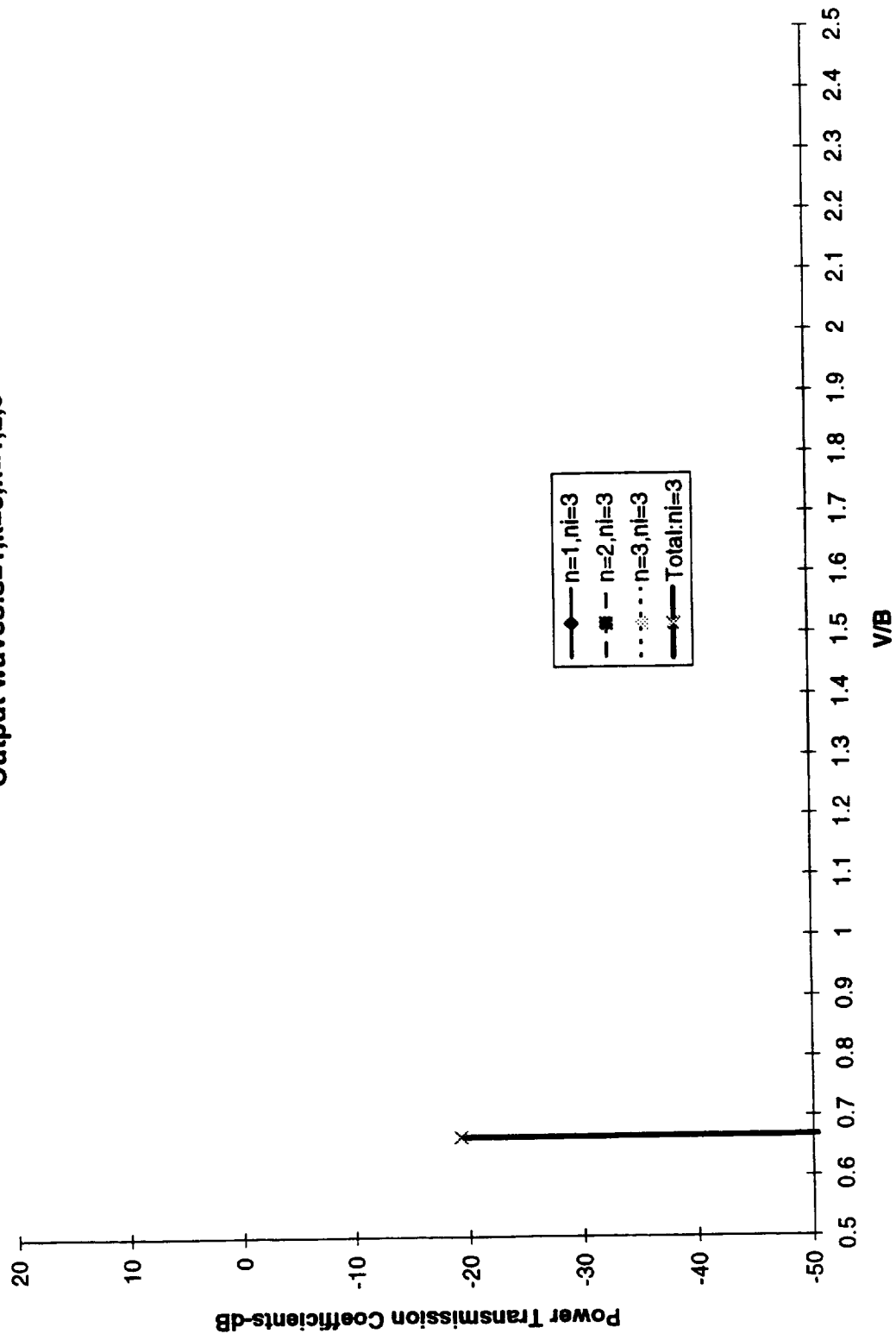
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=2, n_i=3$

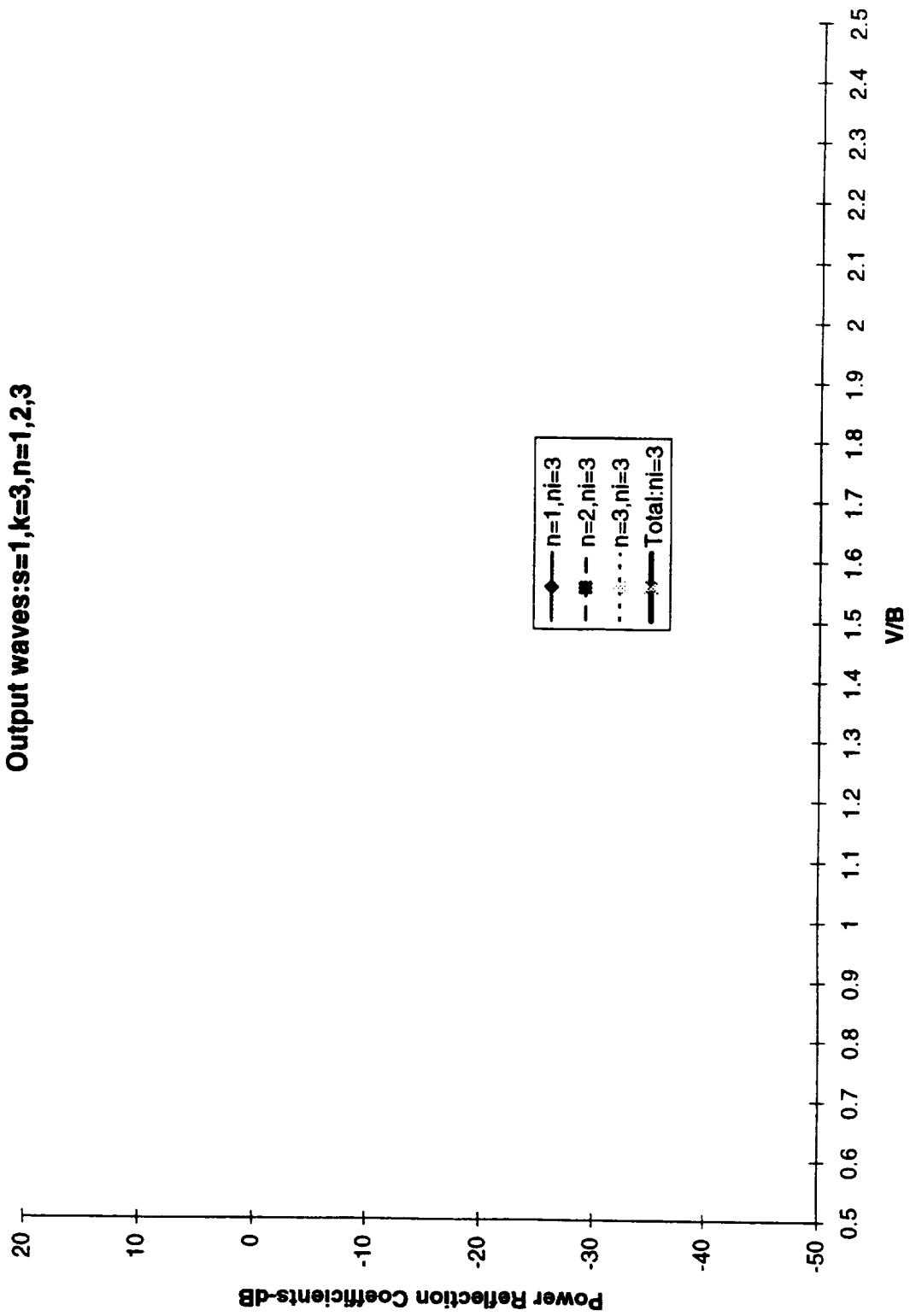
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

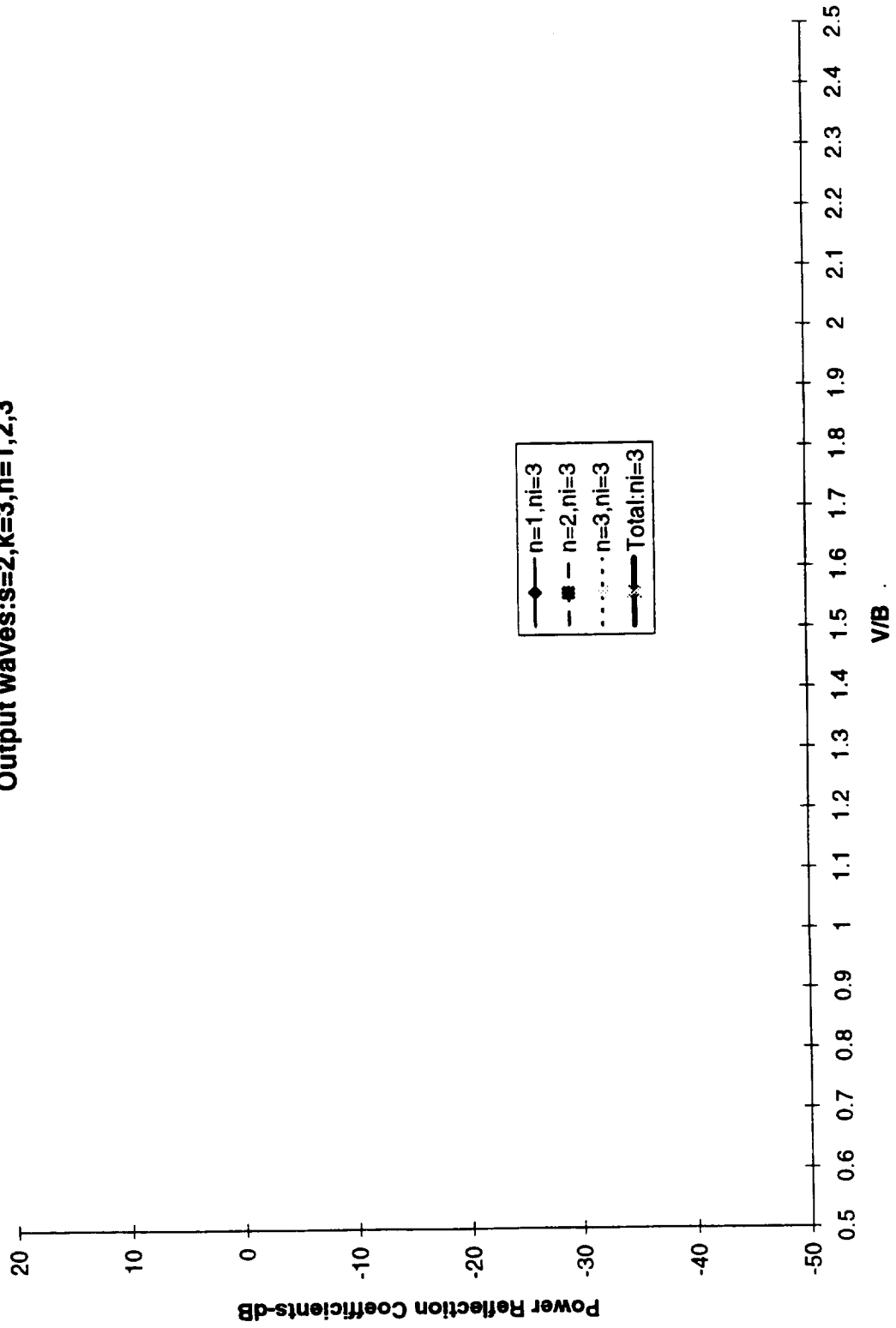
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

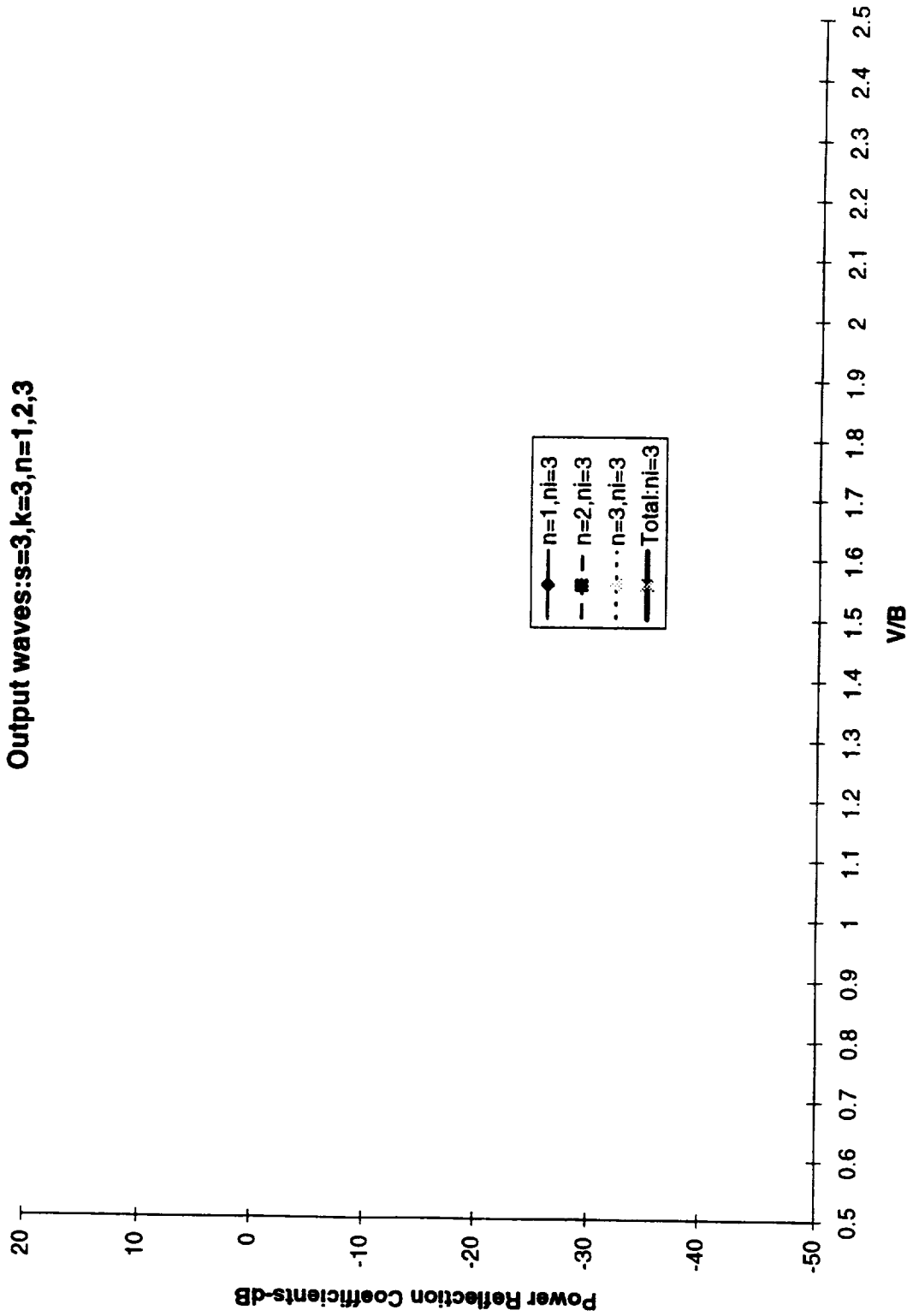
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_l=1, k_l=3, n_l=3$

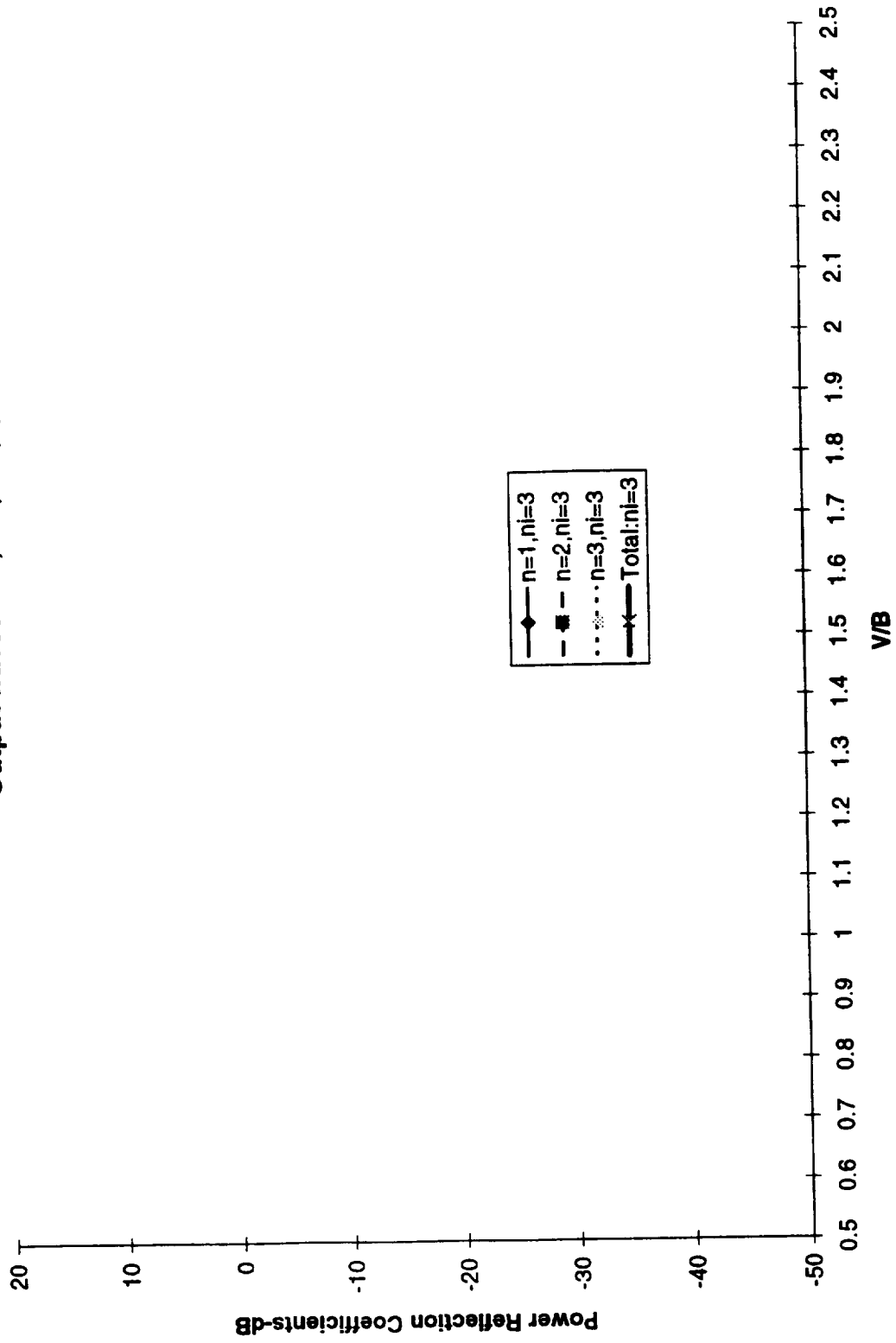
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_l=3, n_i=3$

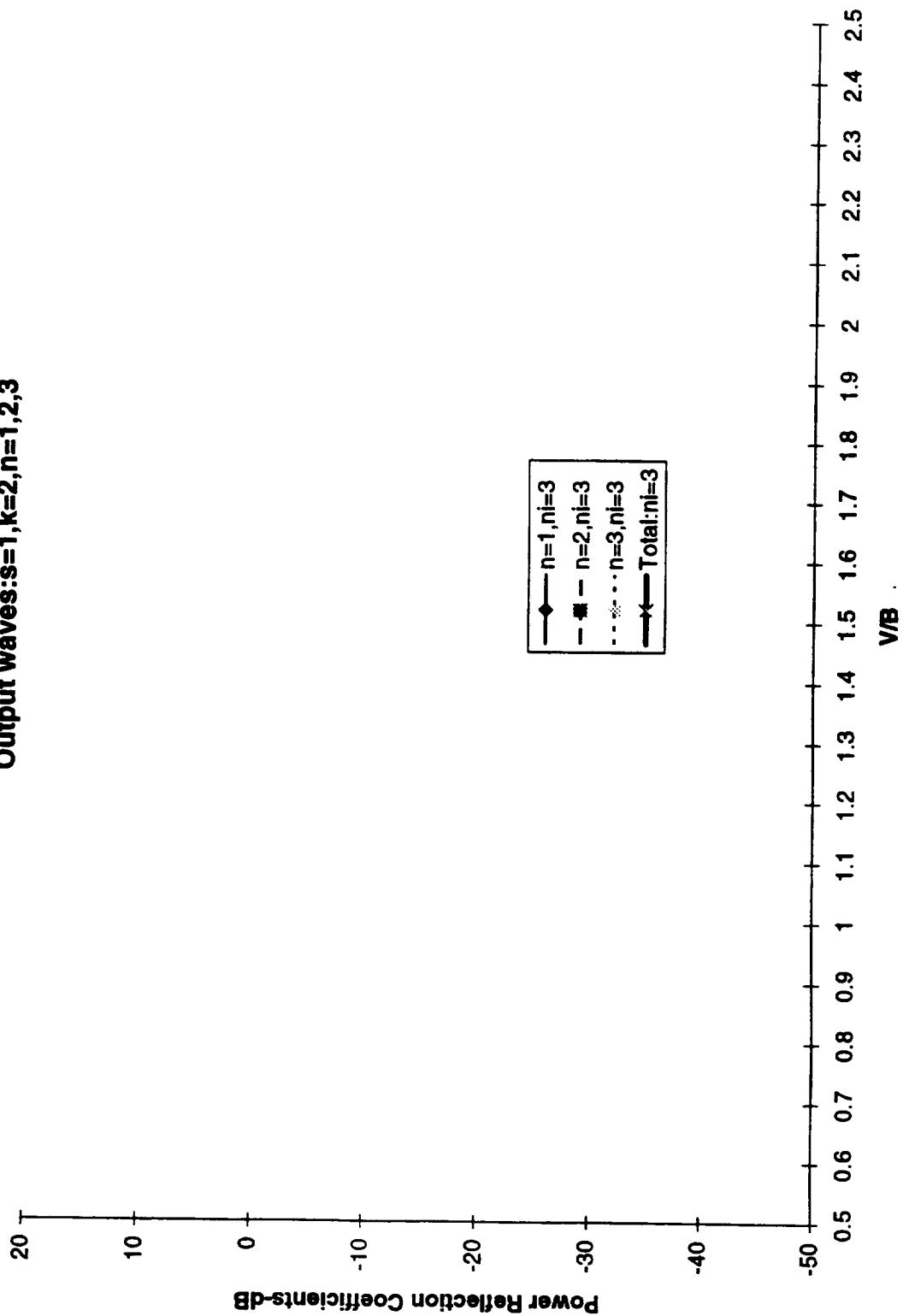
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_l=1, k_l=3, n_l=3$

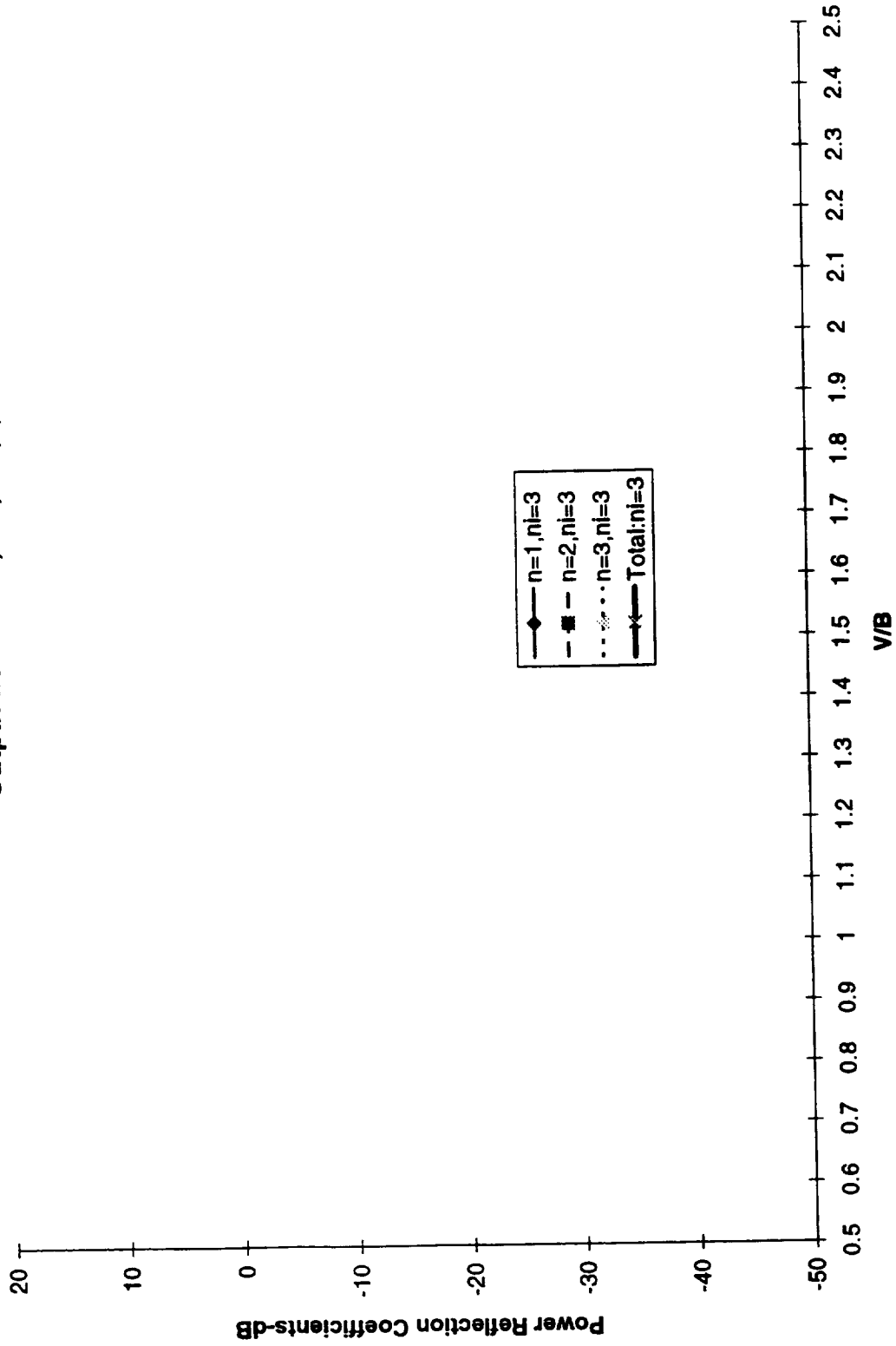
Output wave: $s=1, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

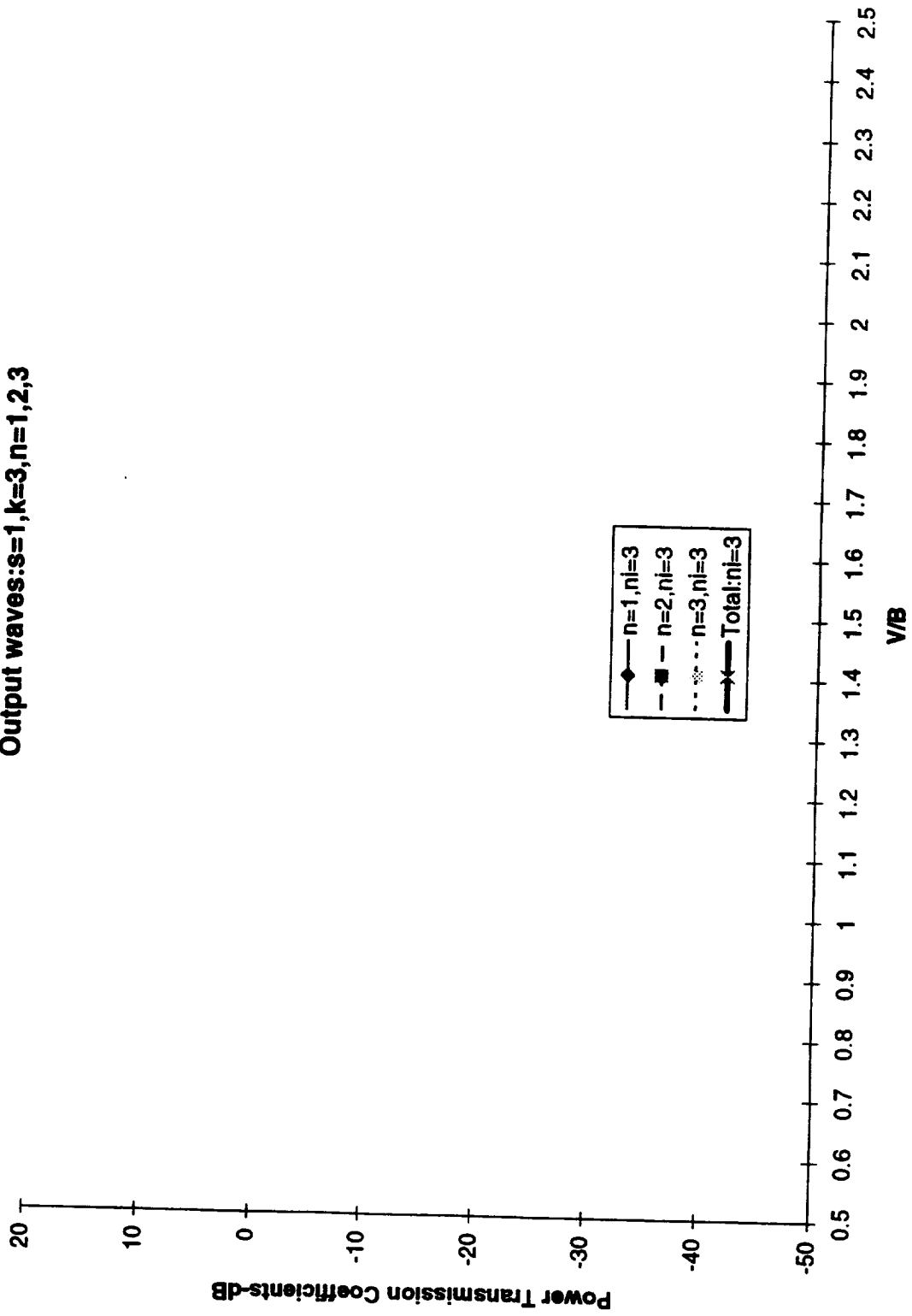
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

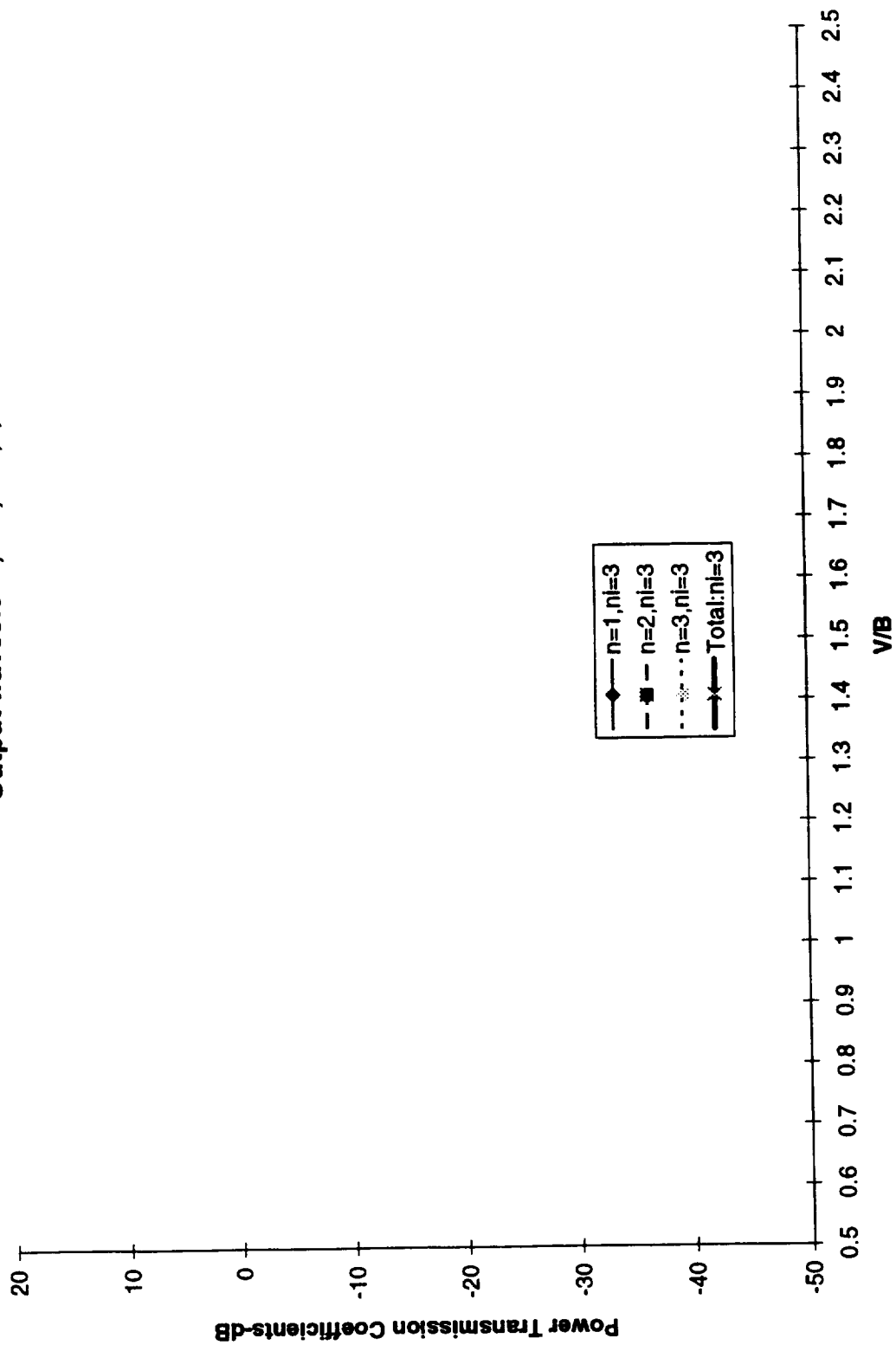
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_l=1, k_l=3, n_l=3$

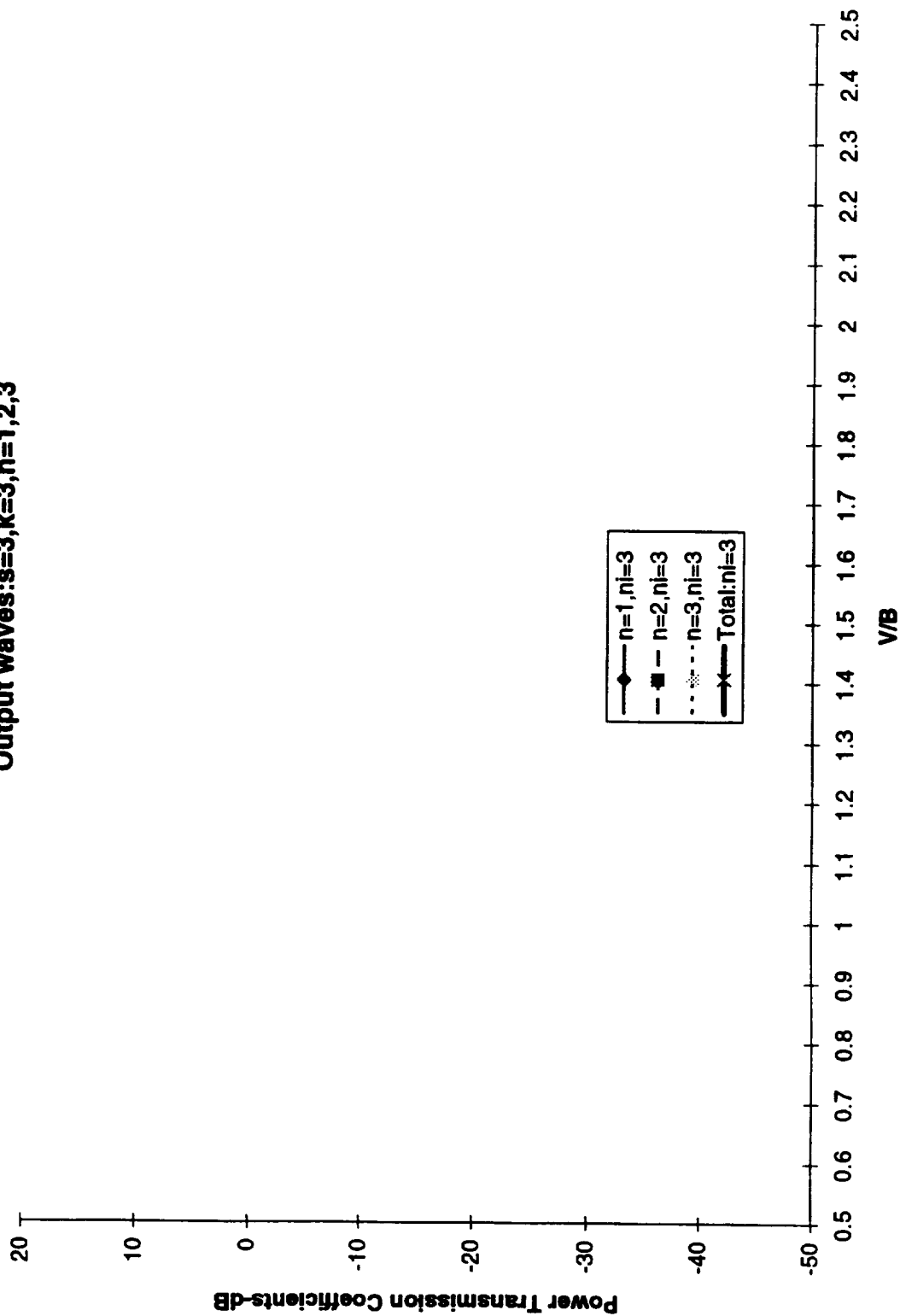
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

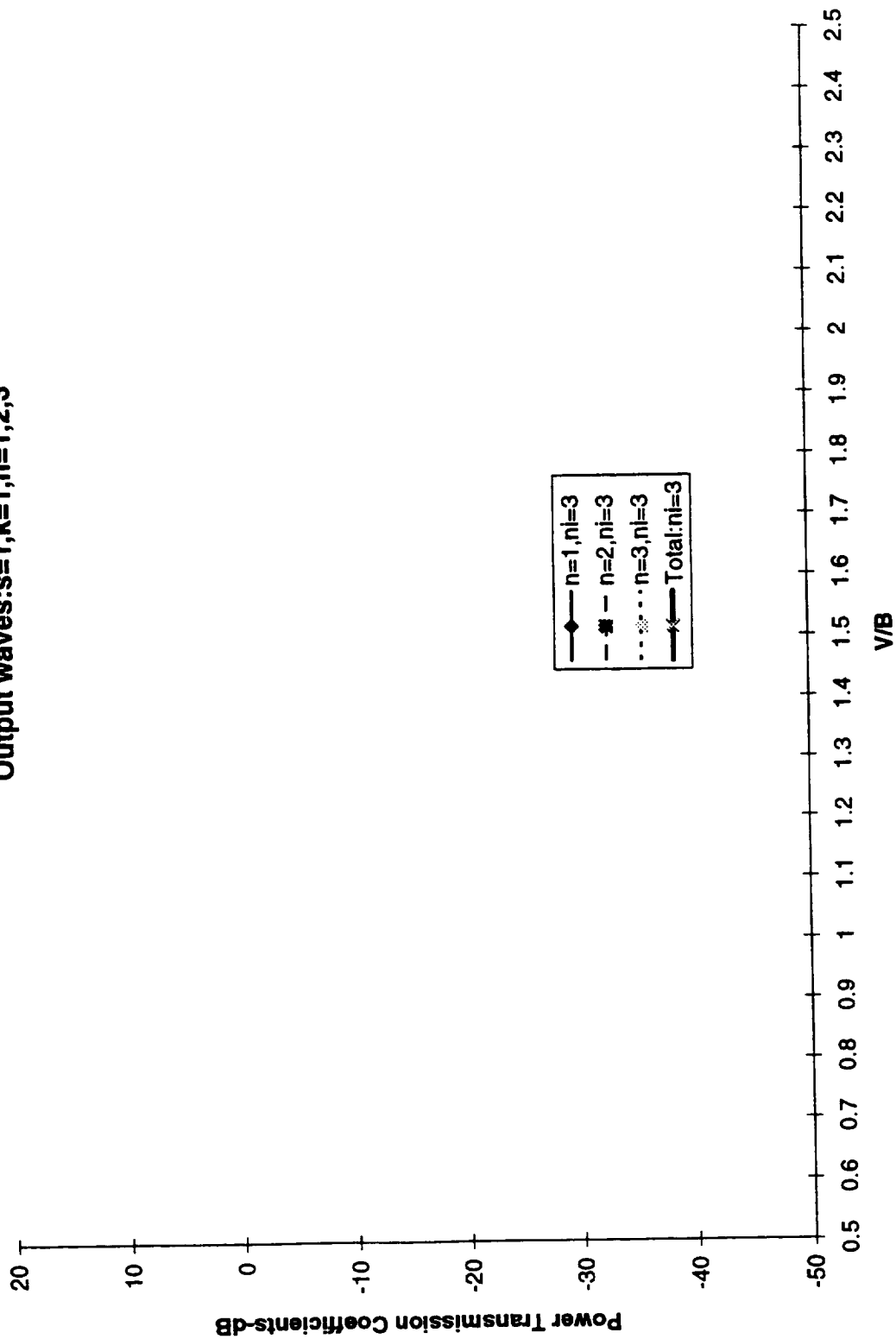
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

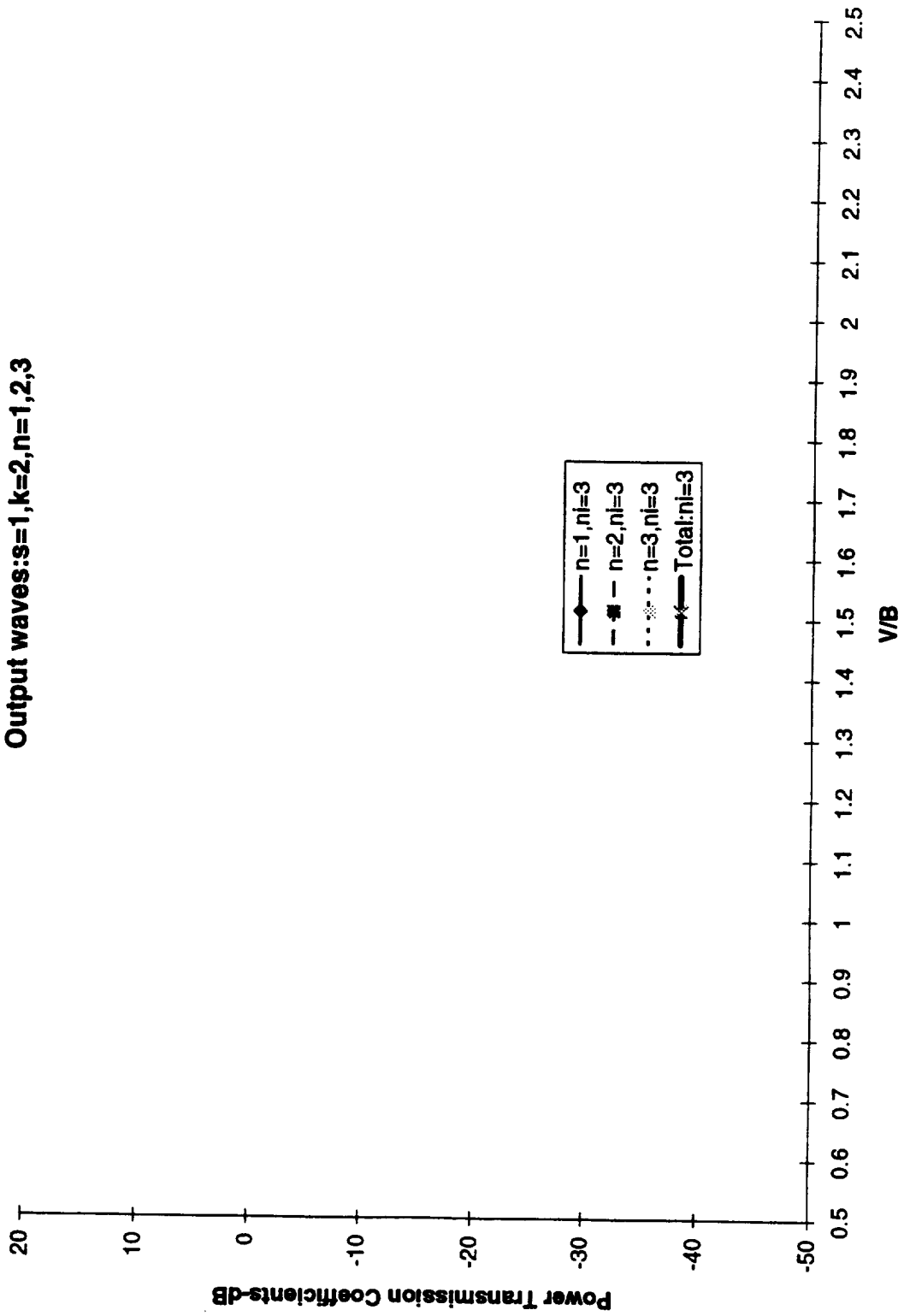
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

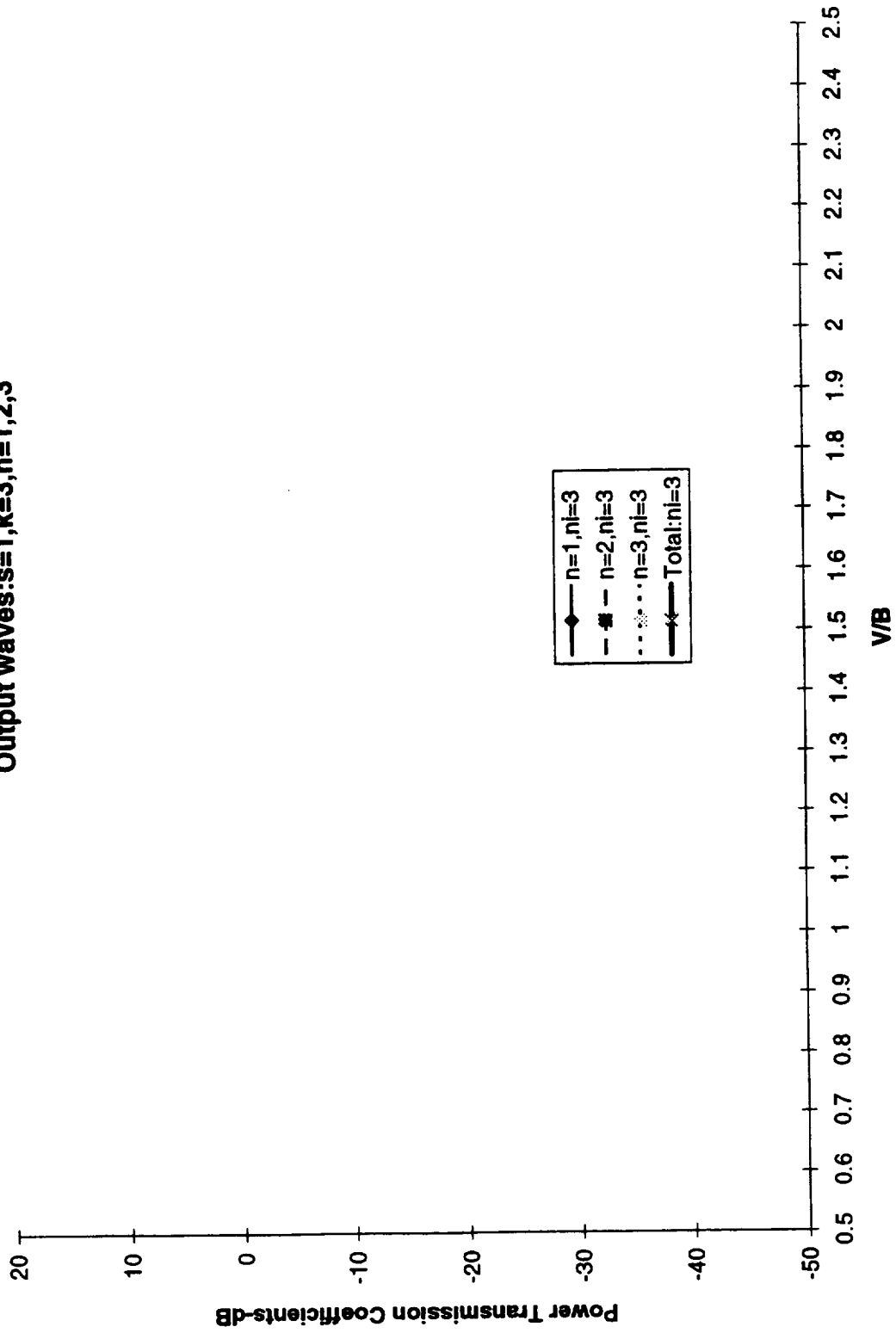
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

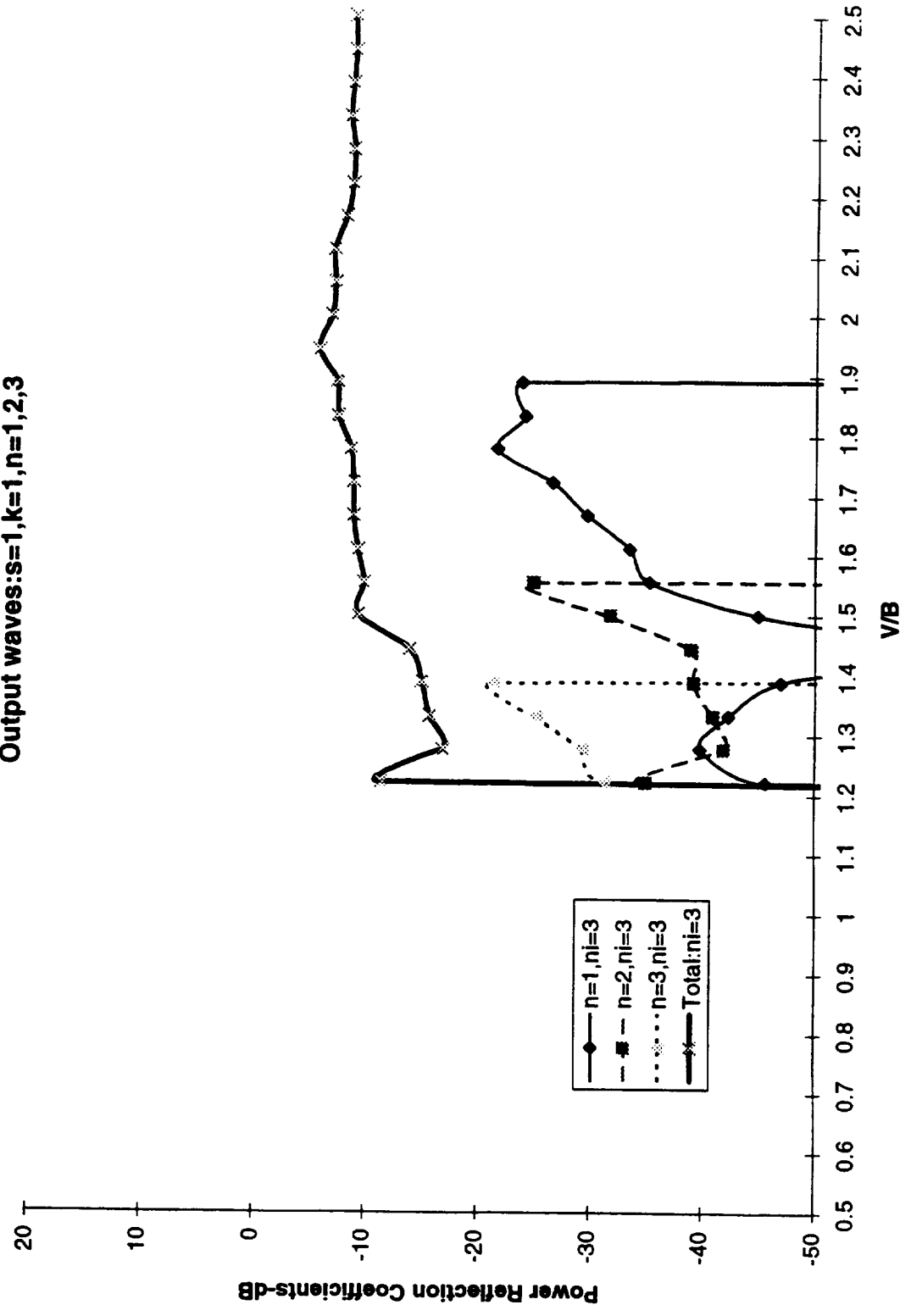
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

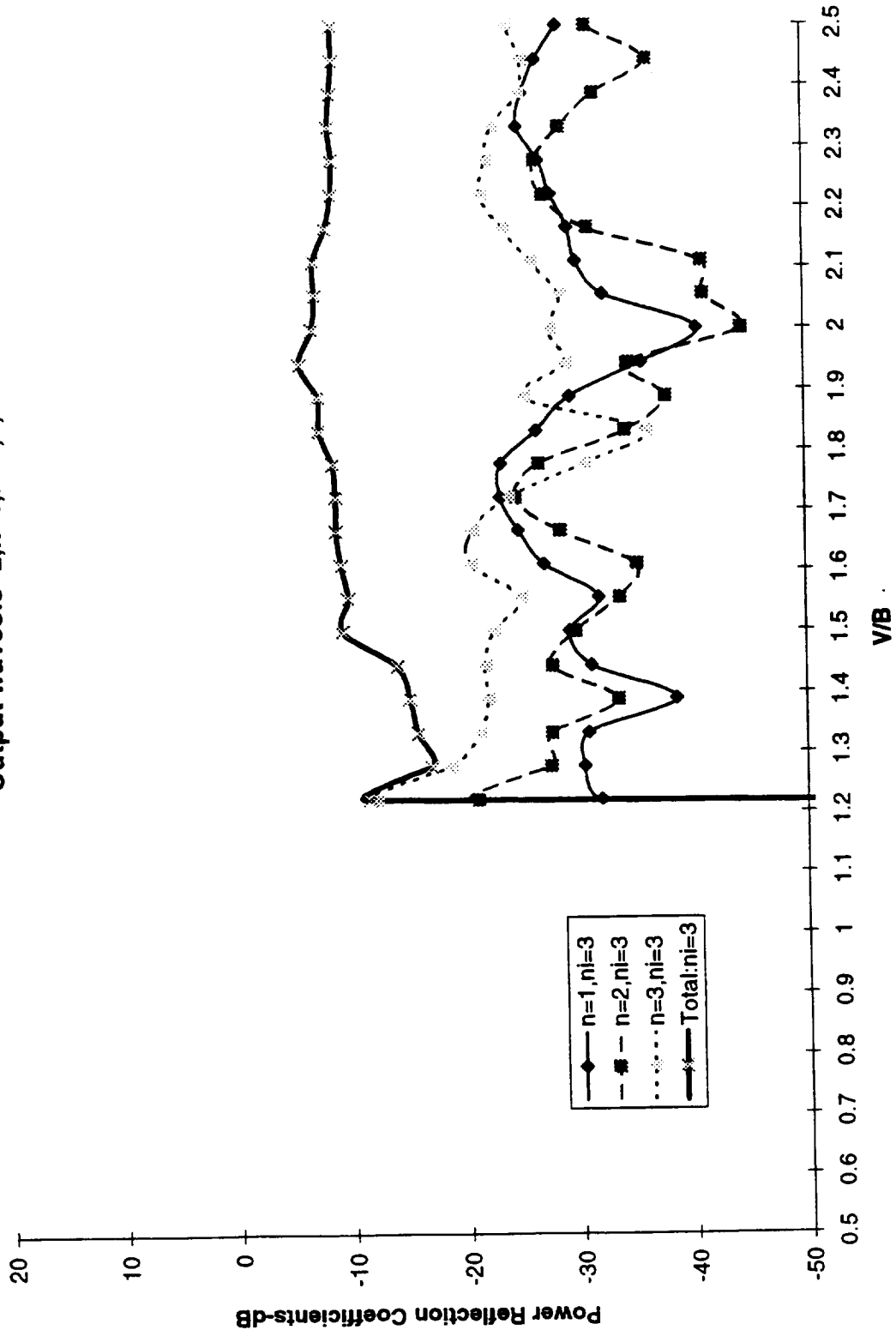
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

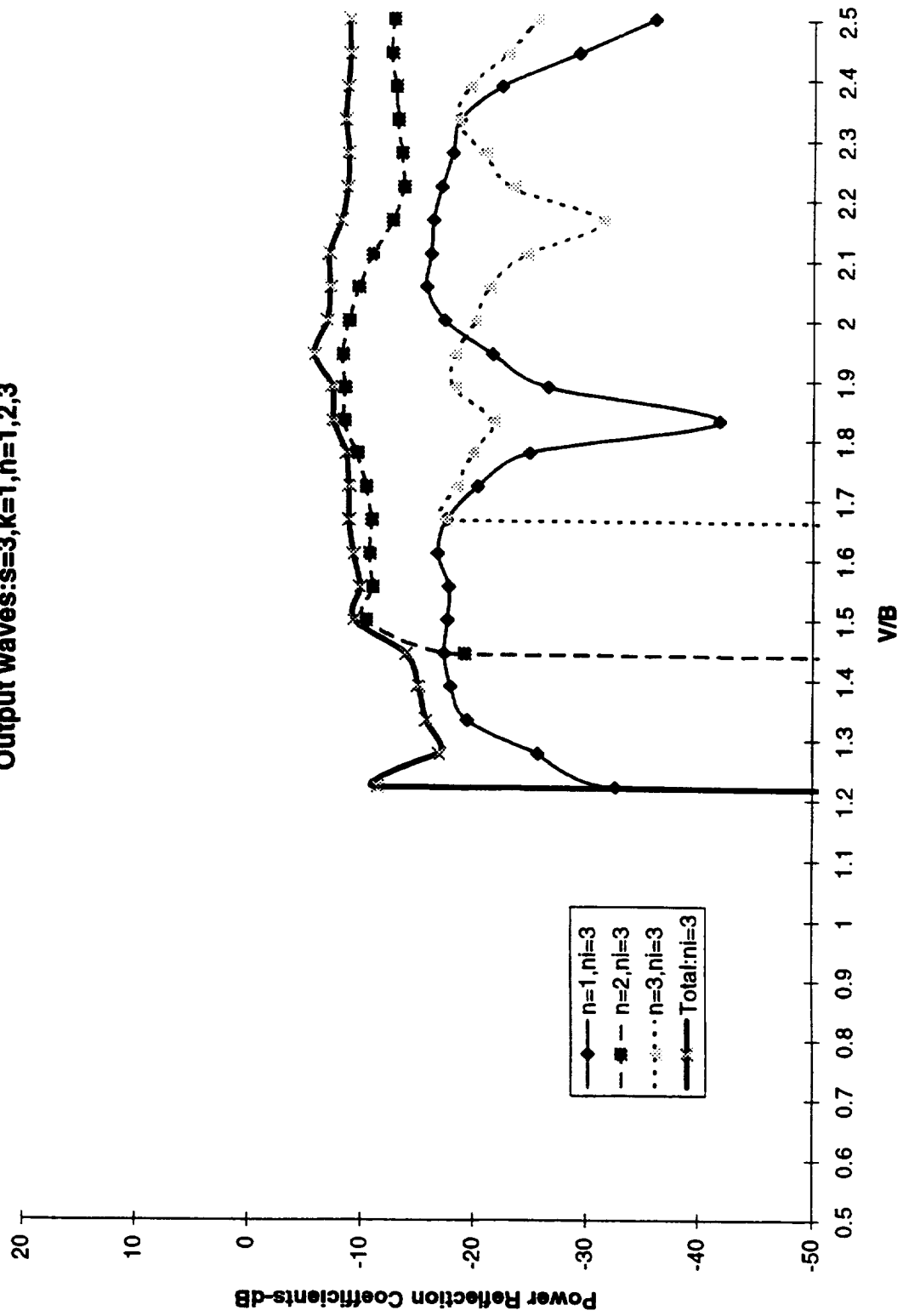
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

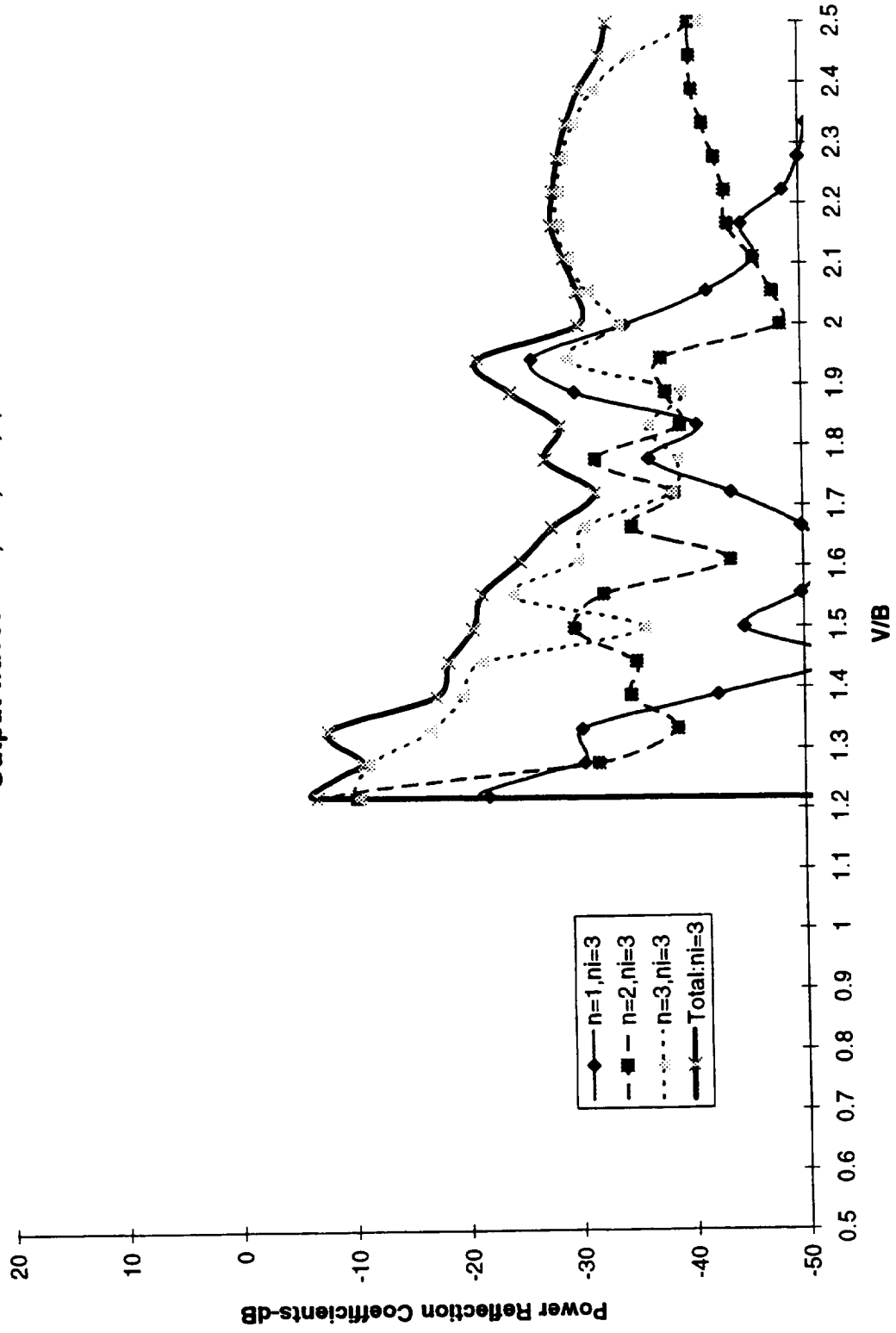
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

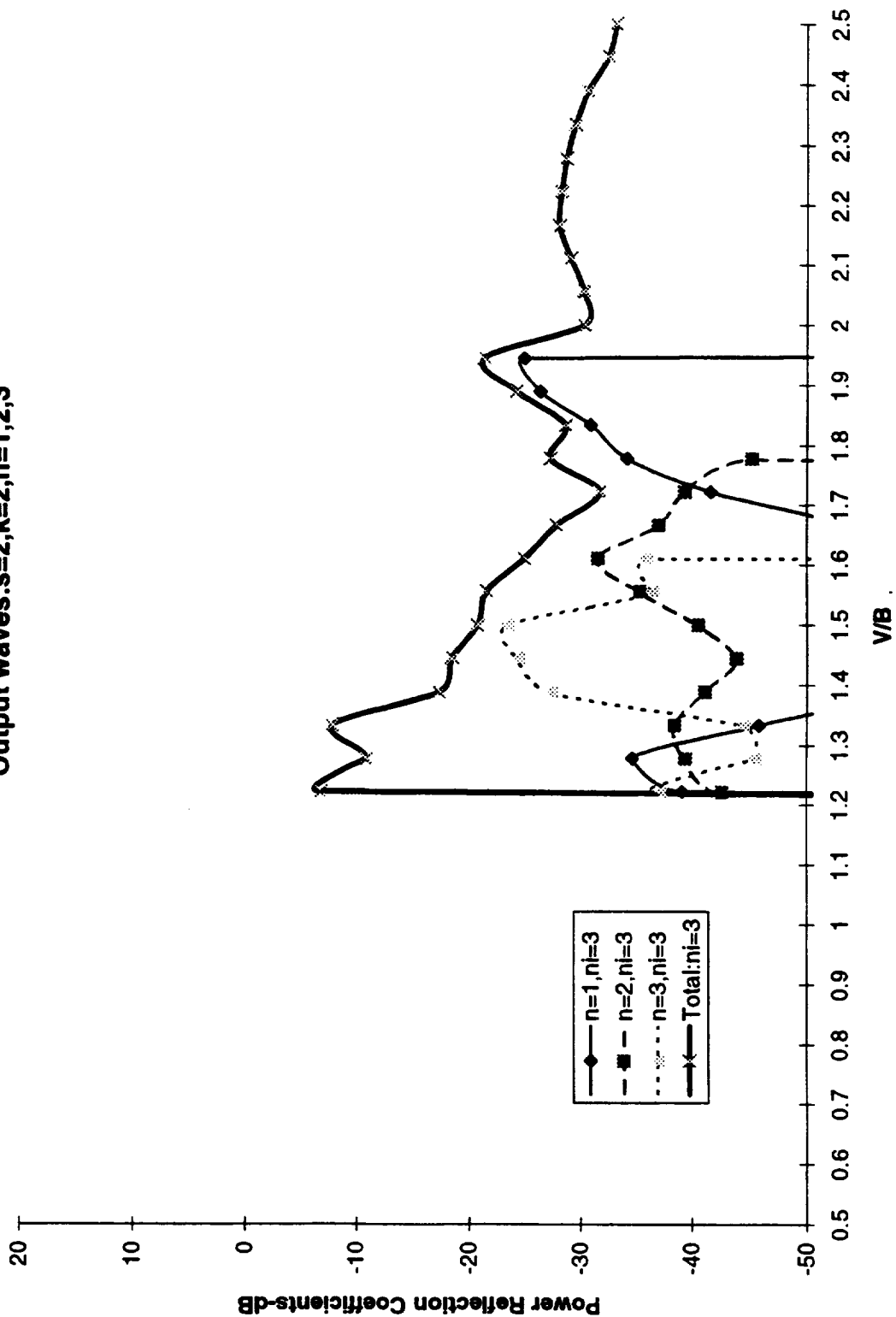
Output wave: $s=2, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_l=2, k_l=1, n_l=3$

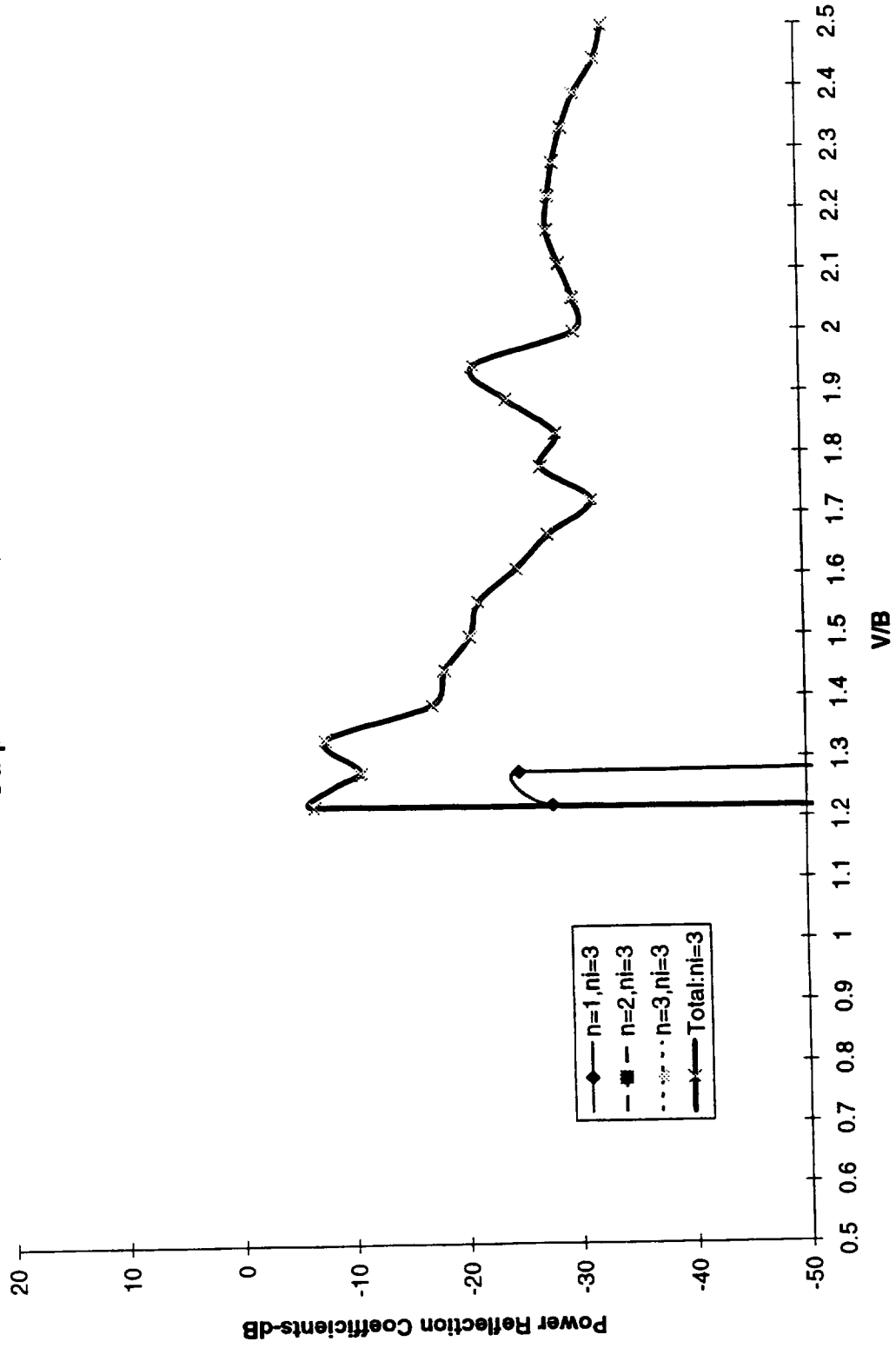
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

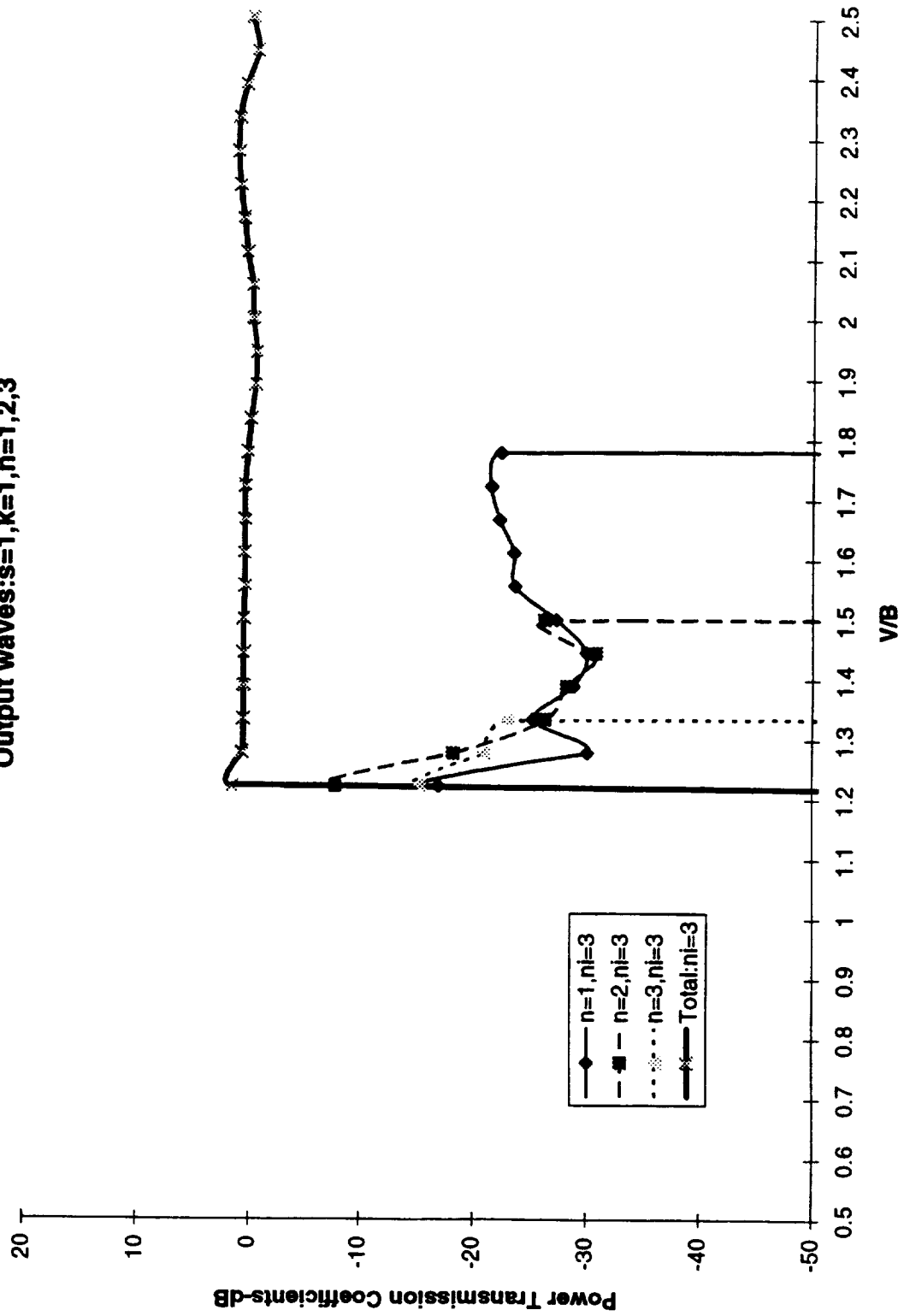
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

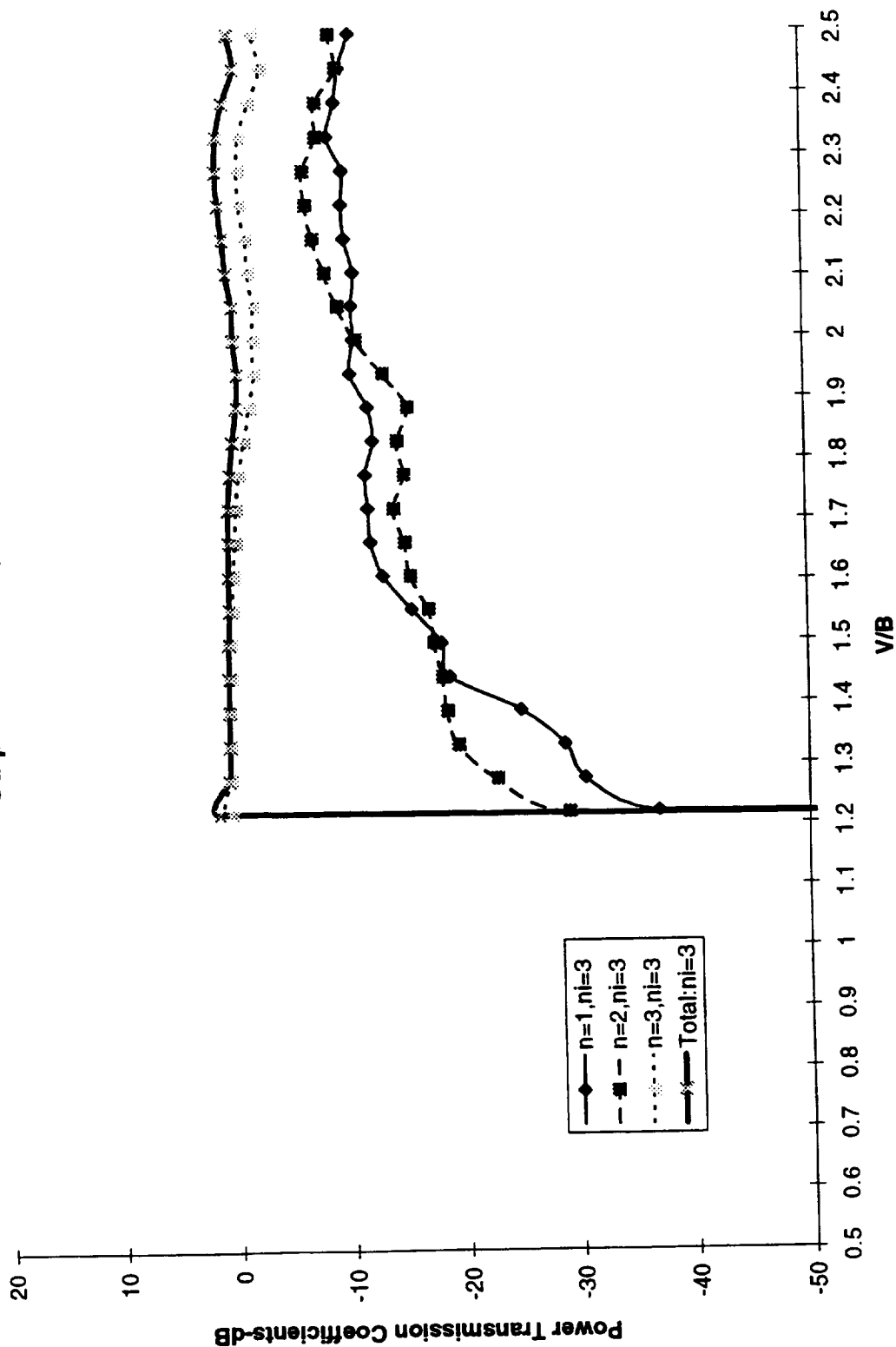
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

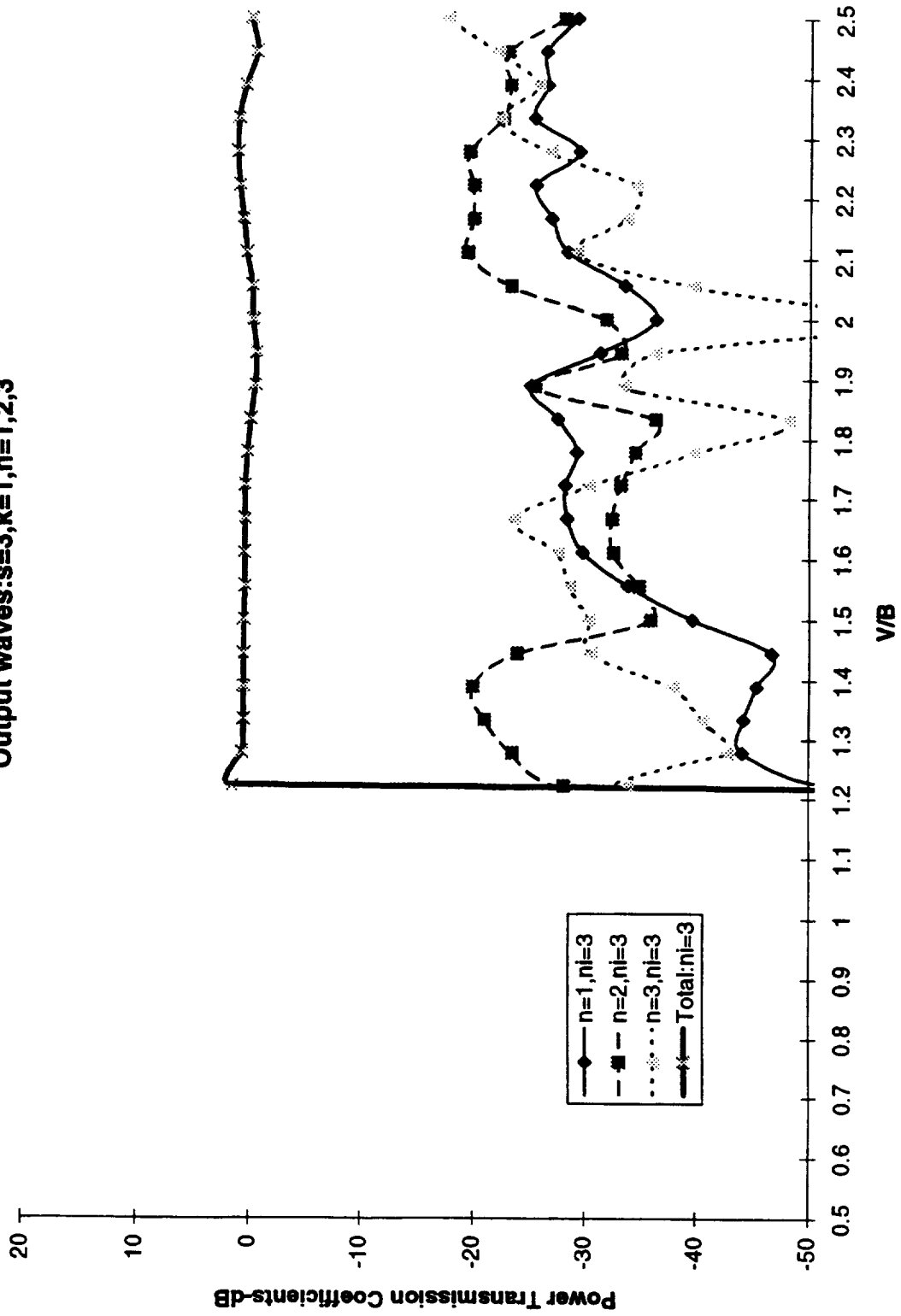
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

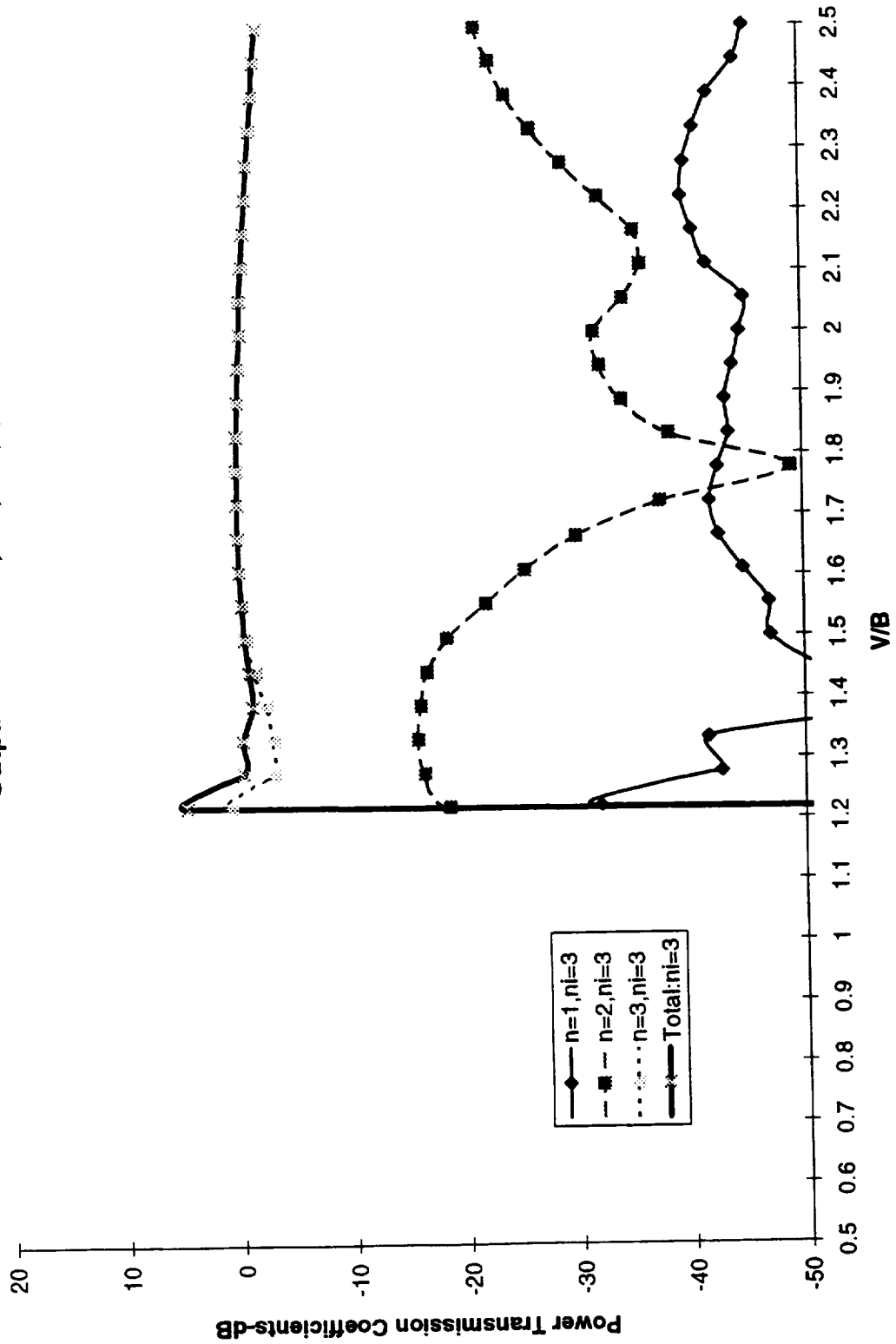
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

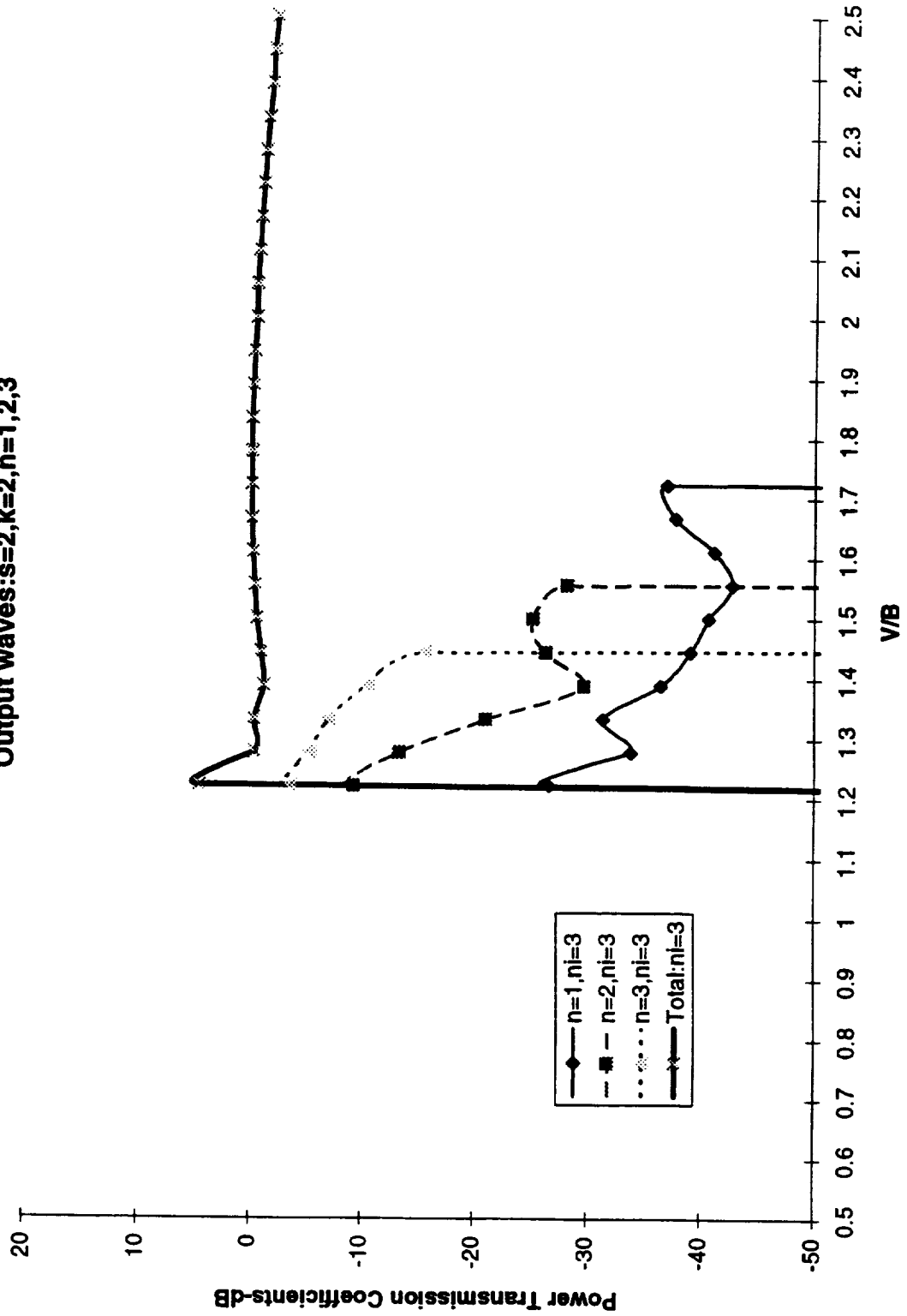
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

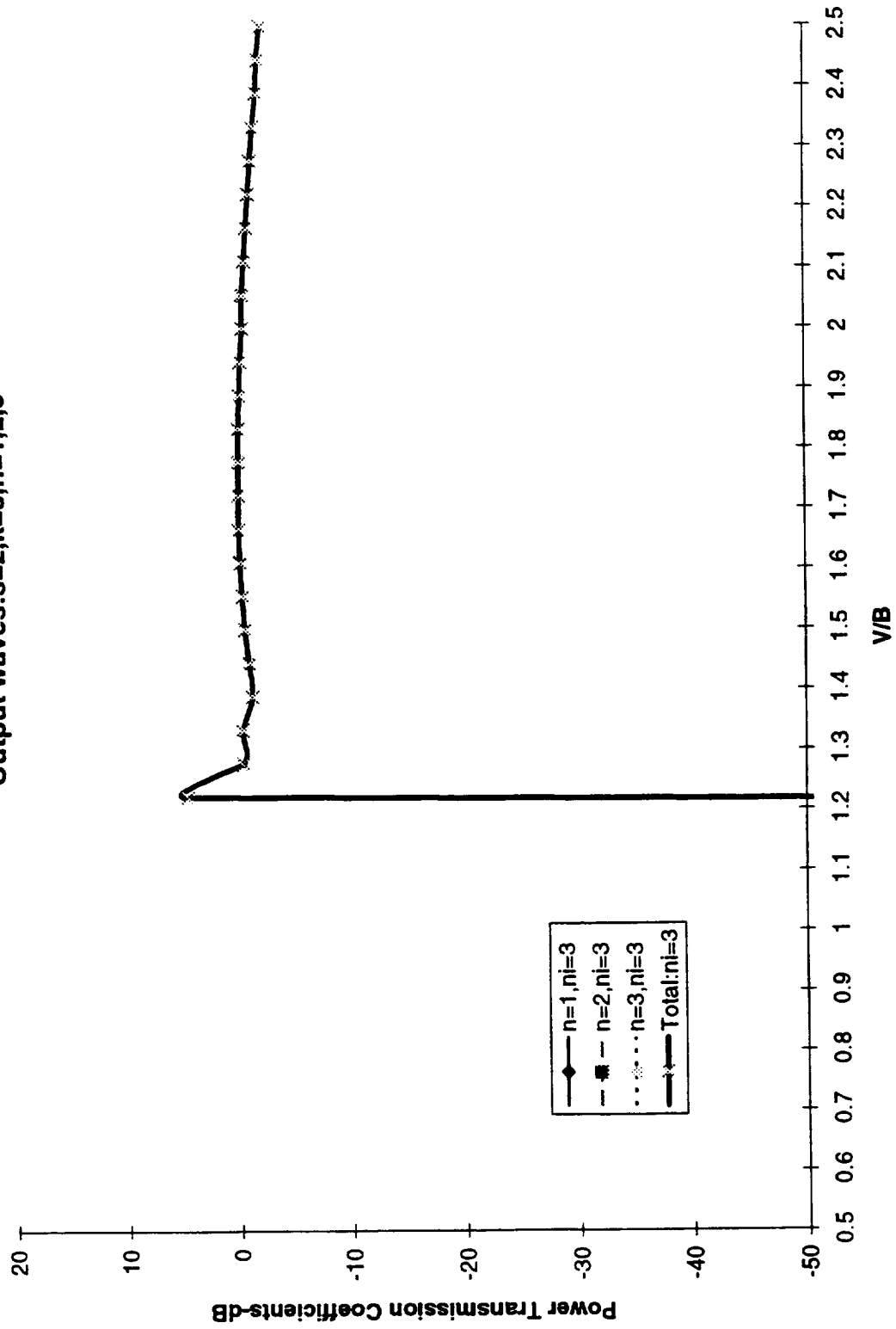
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

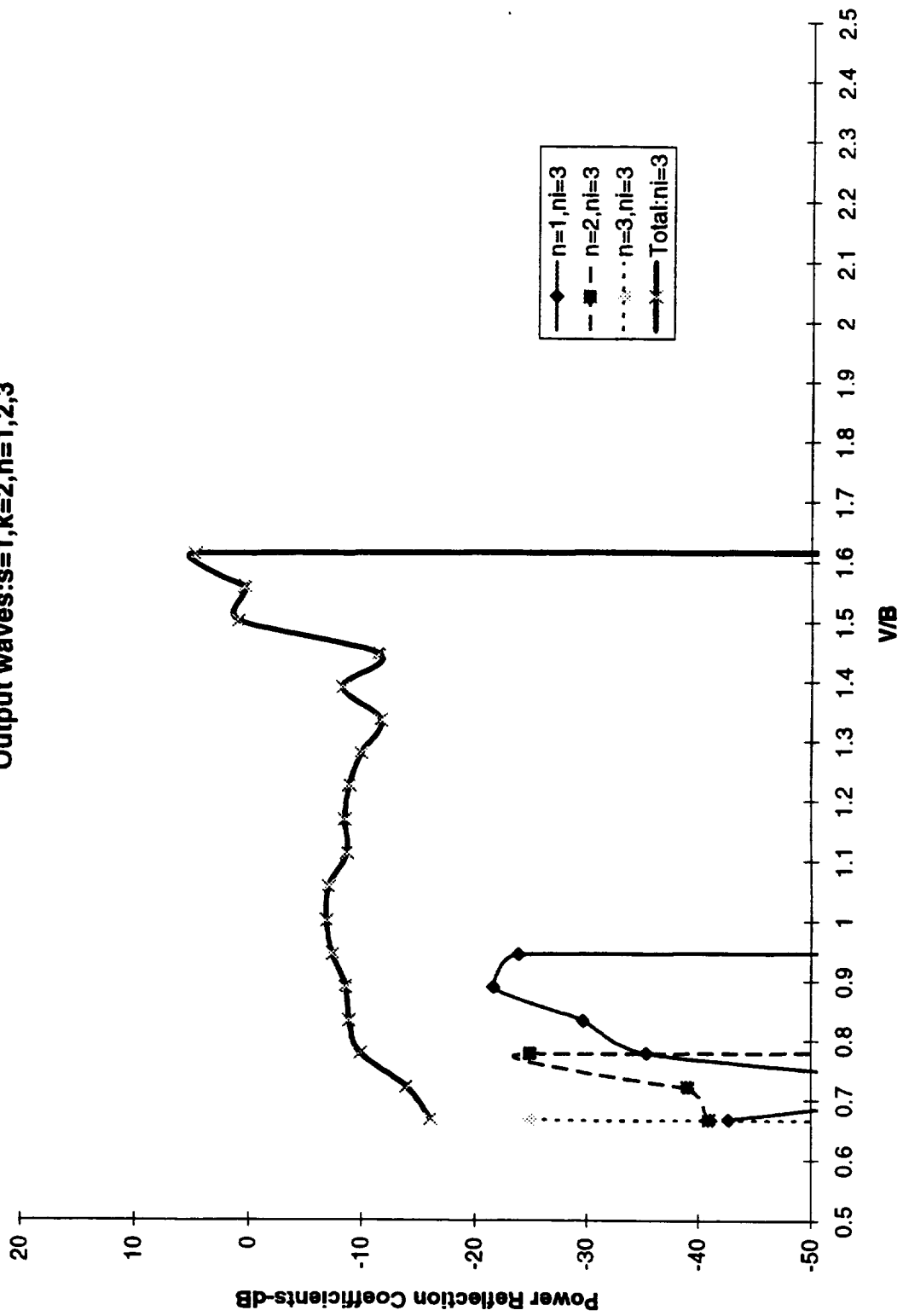
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

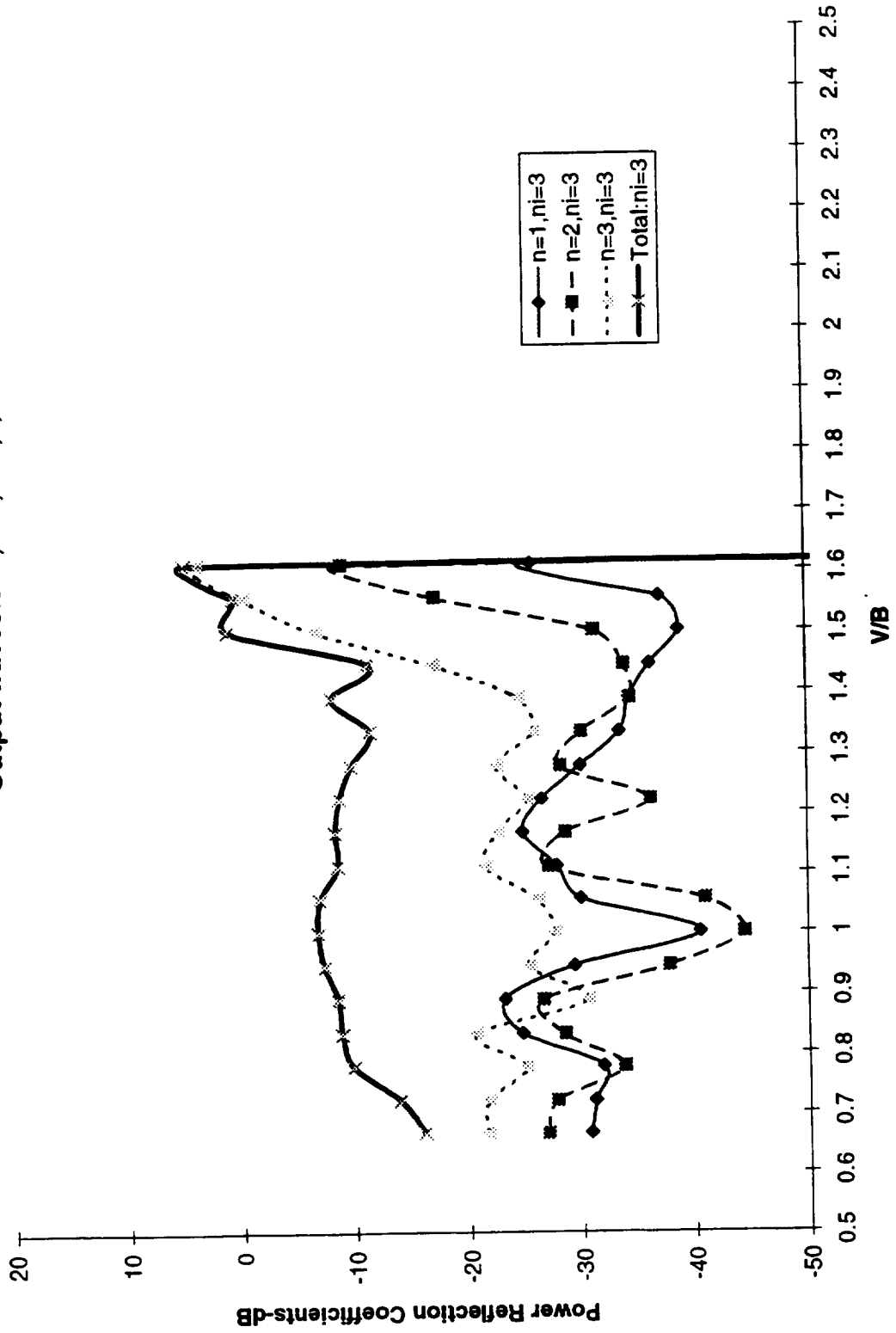
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

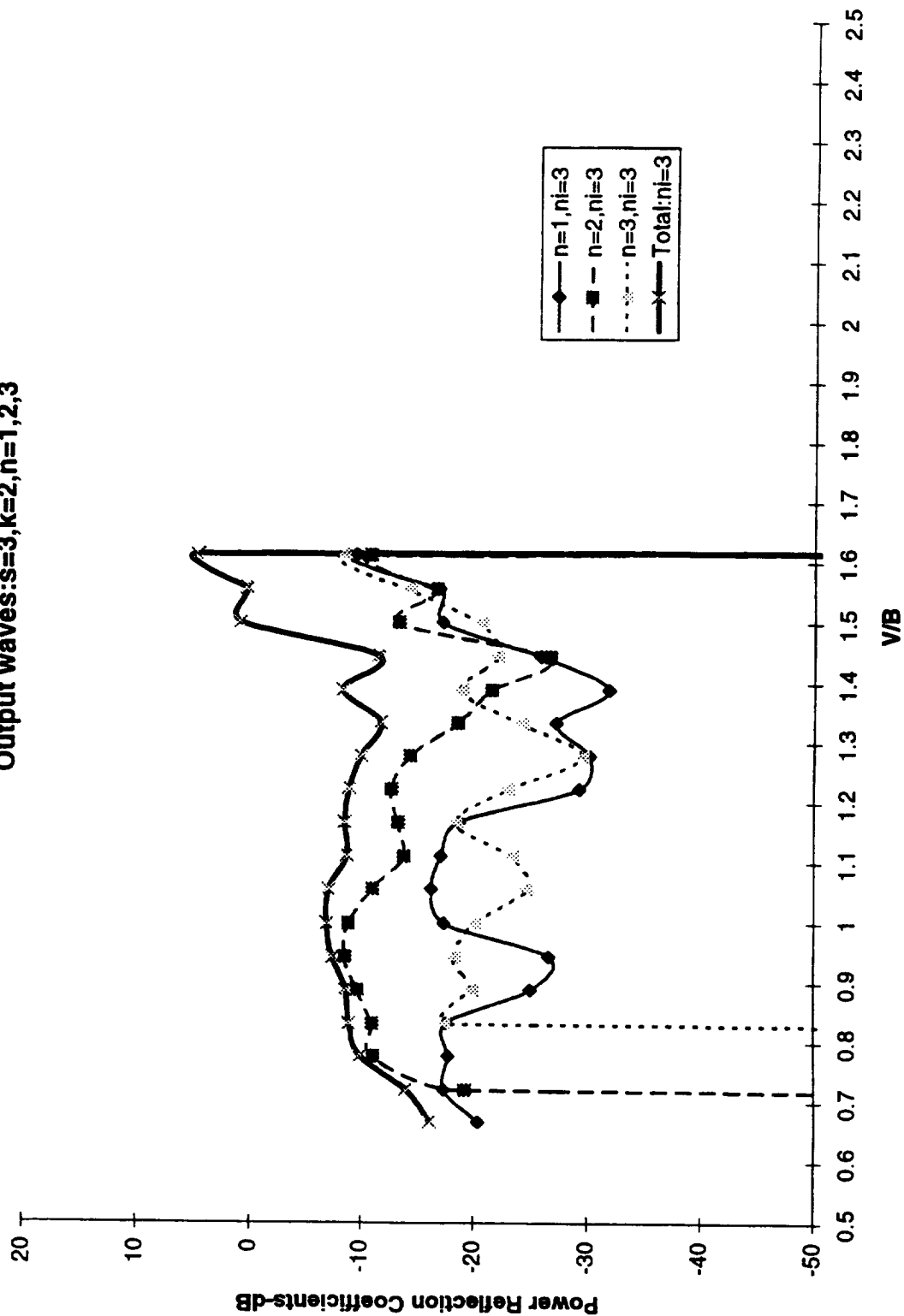
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_l=2, n_l=3$

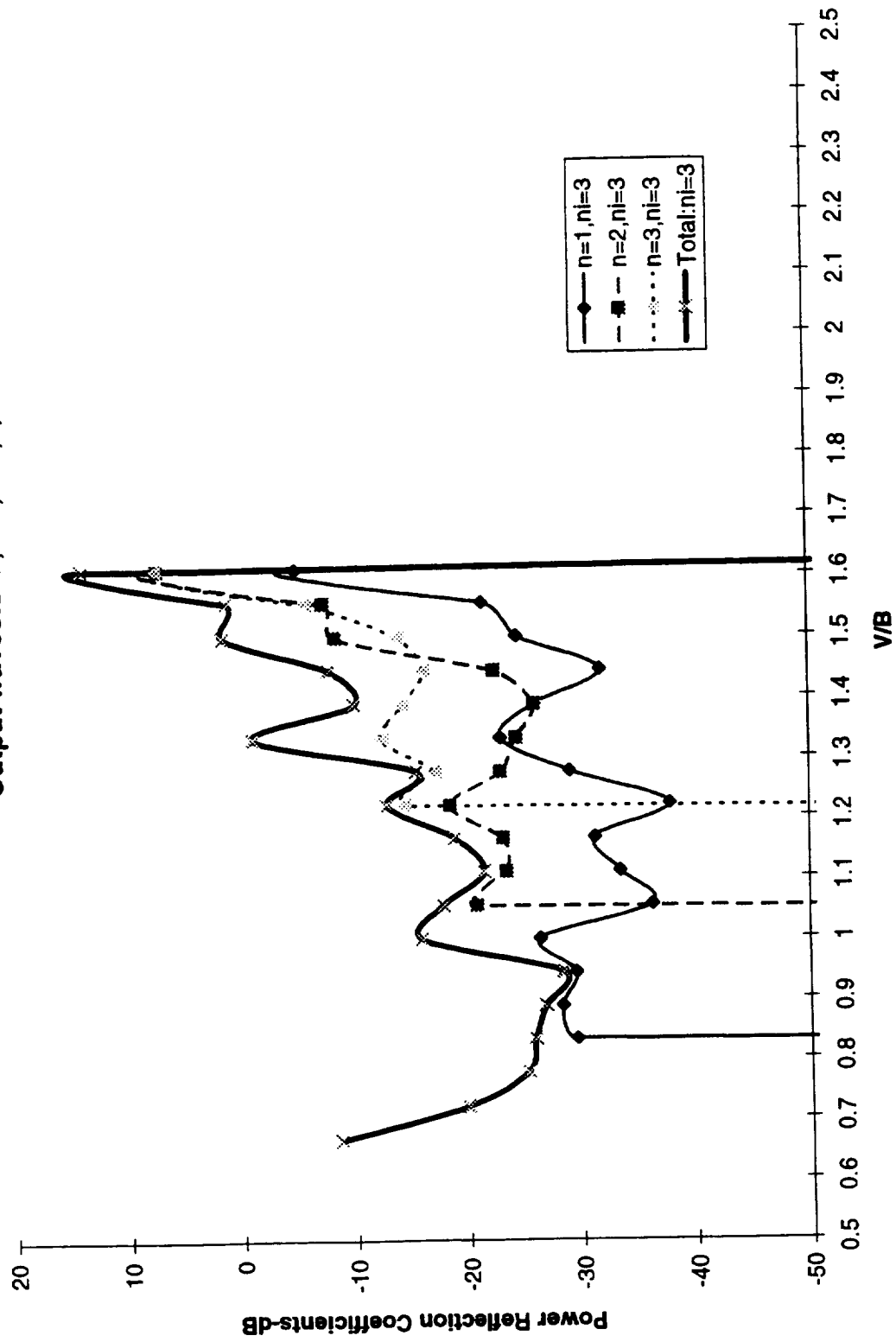
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

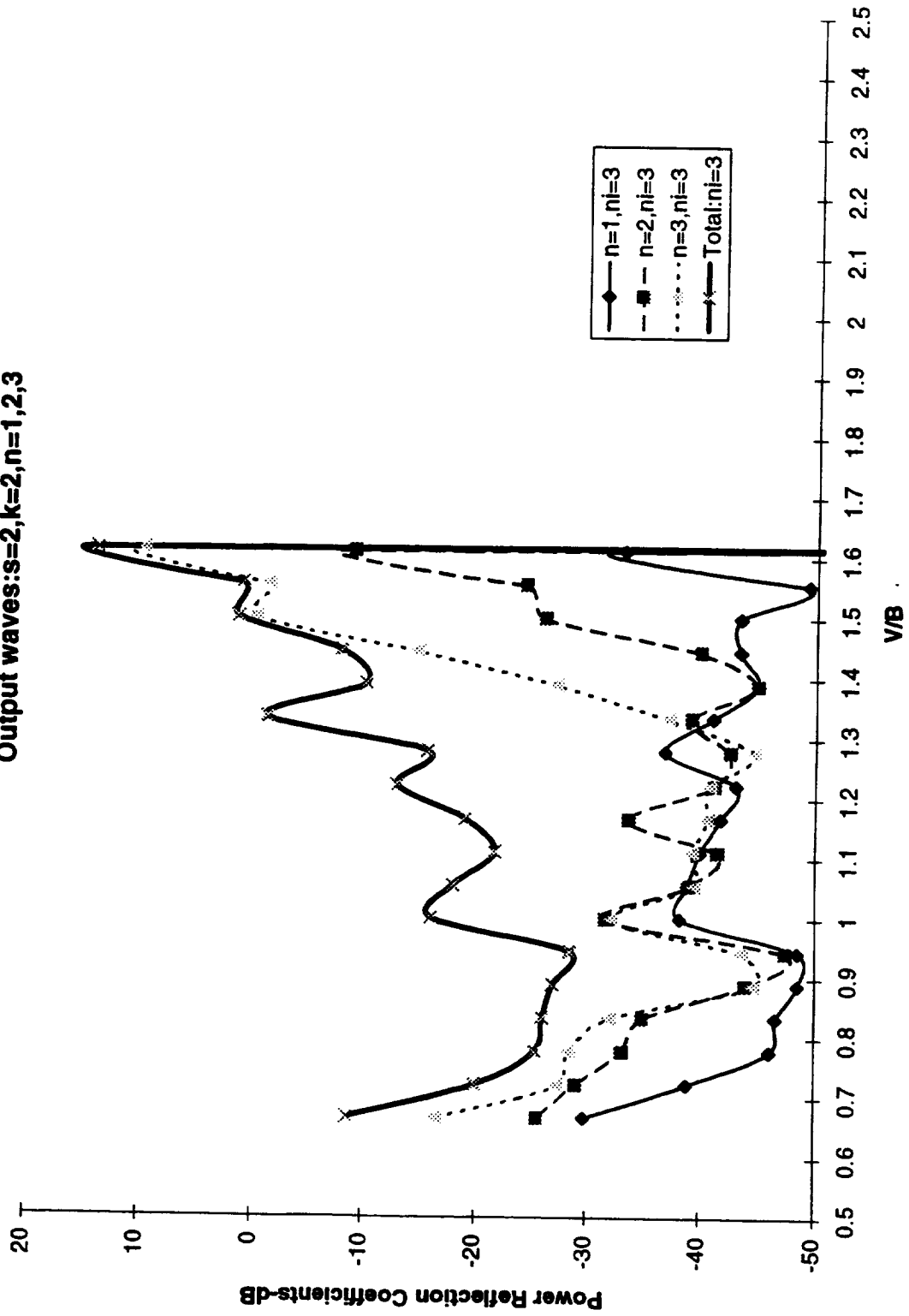
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

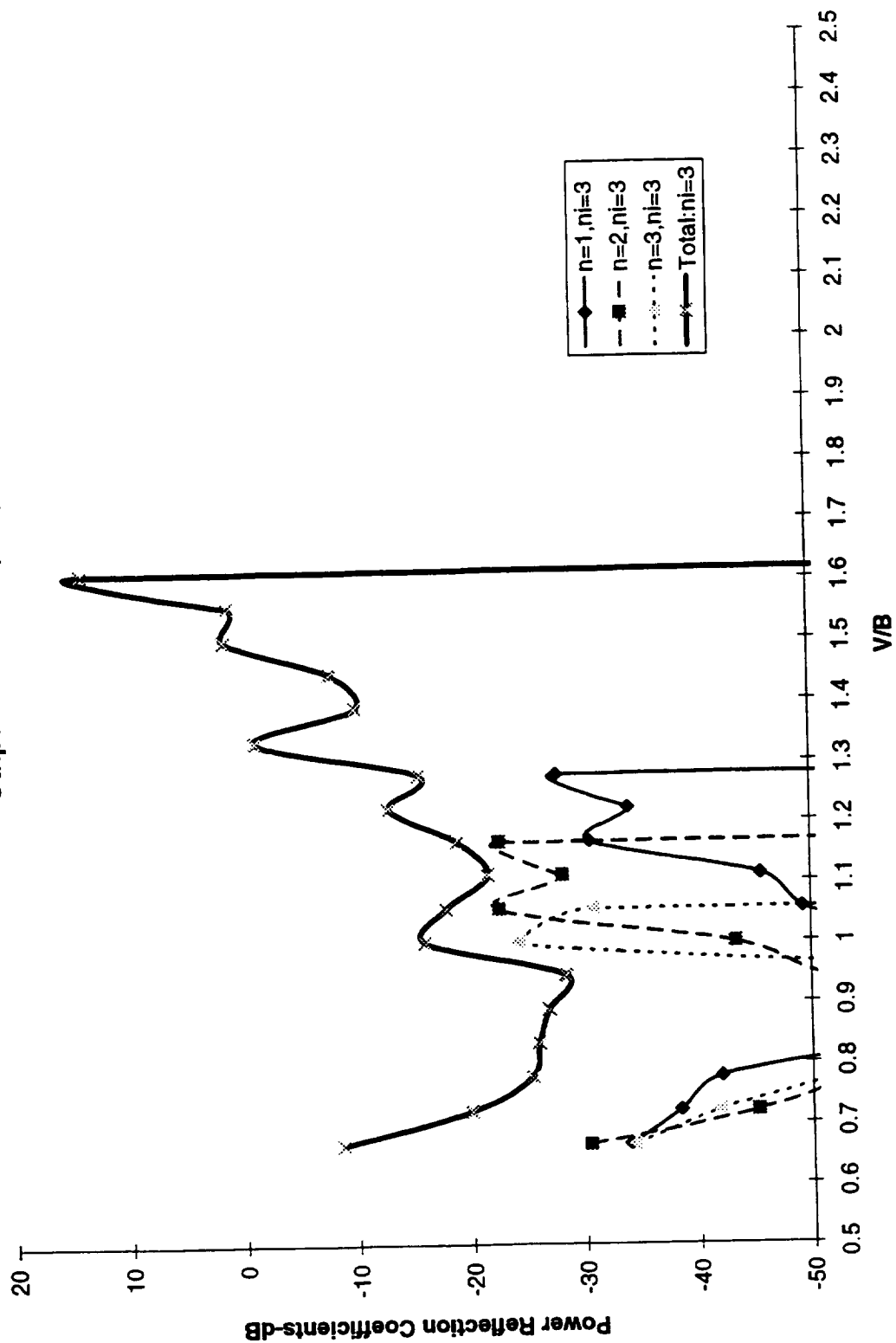
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

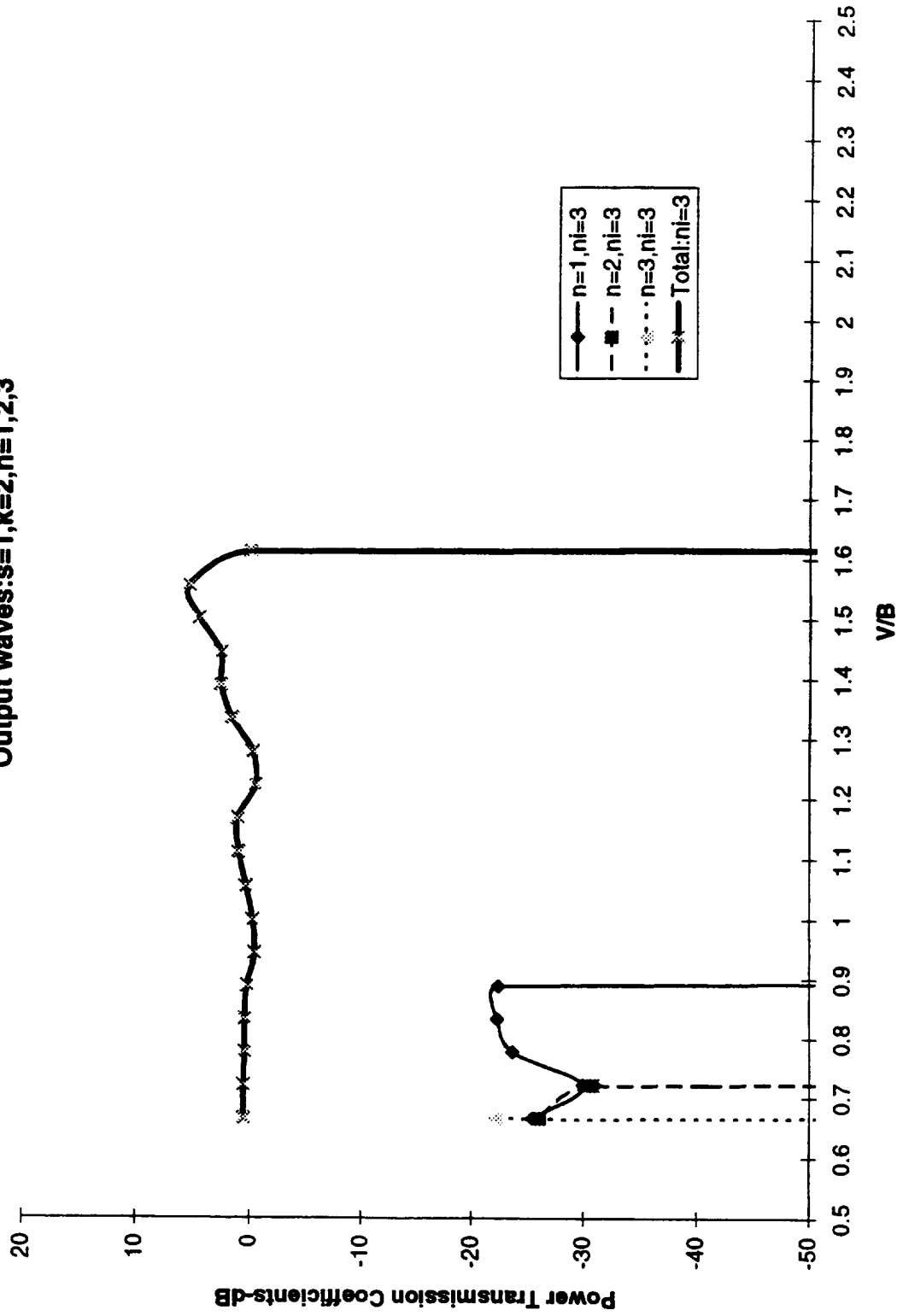
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

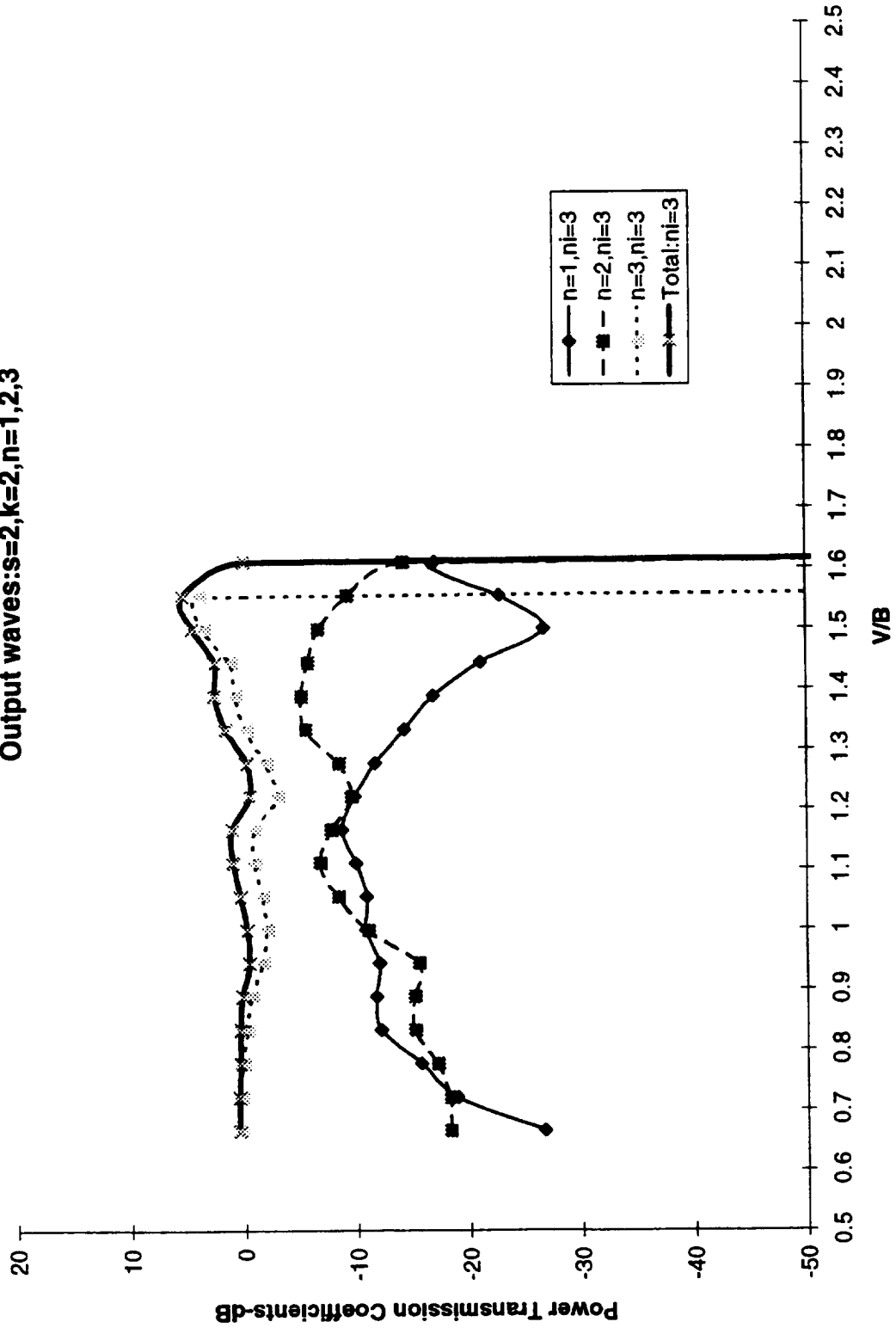
Output wave: $s=1, k=2, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

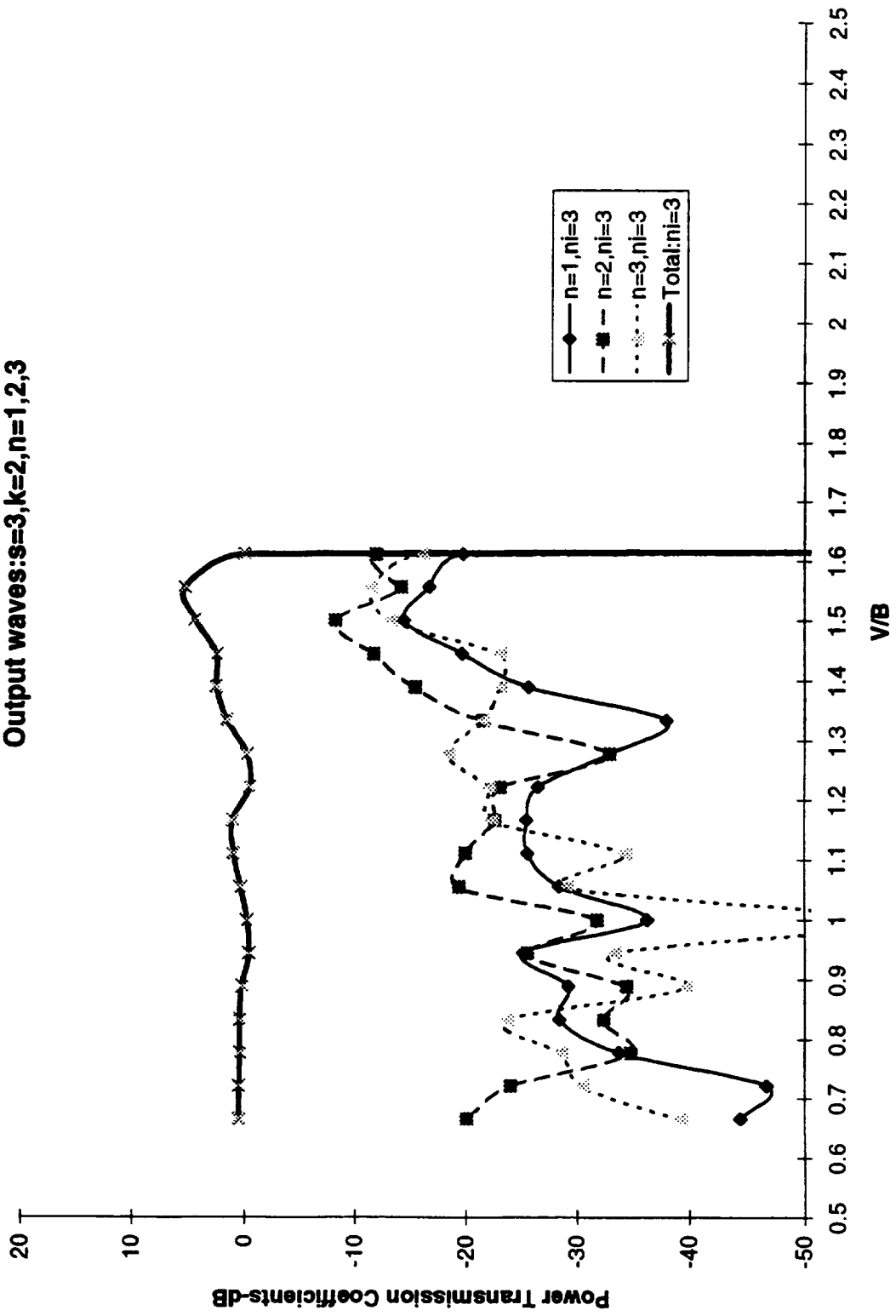
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

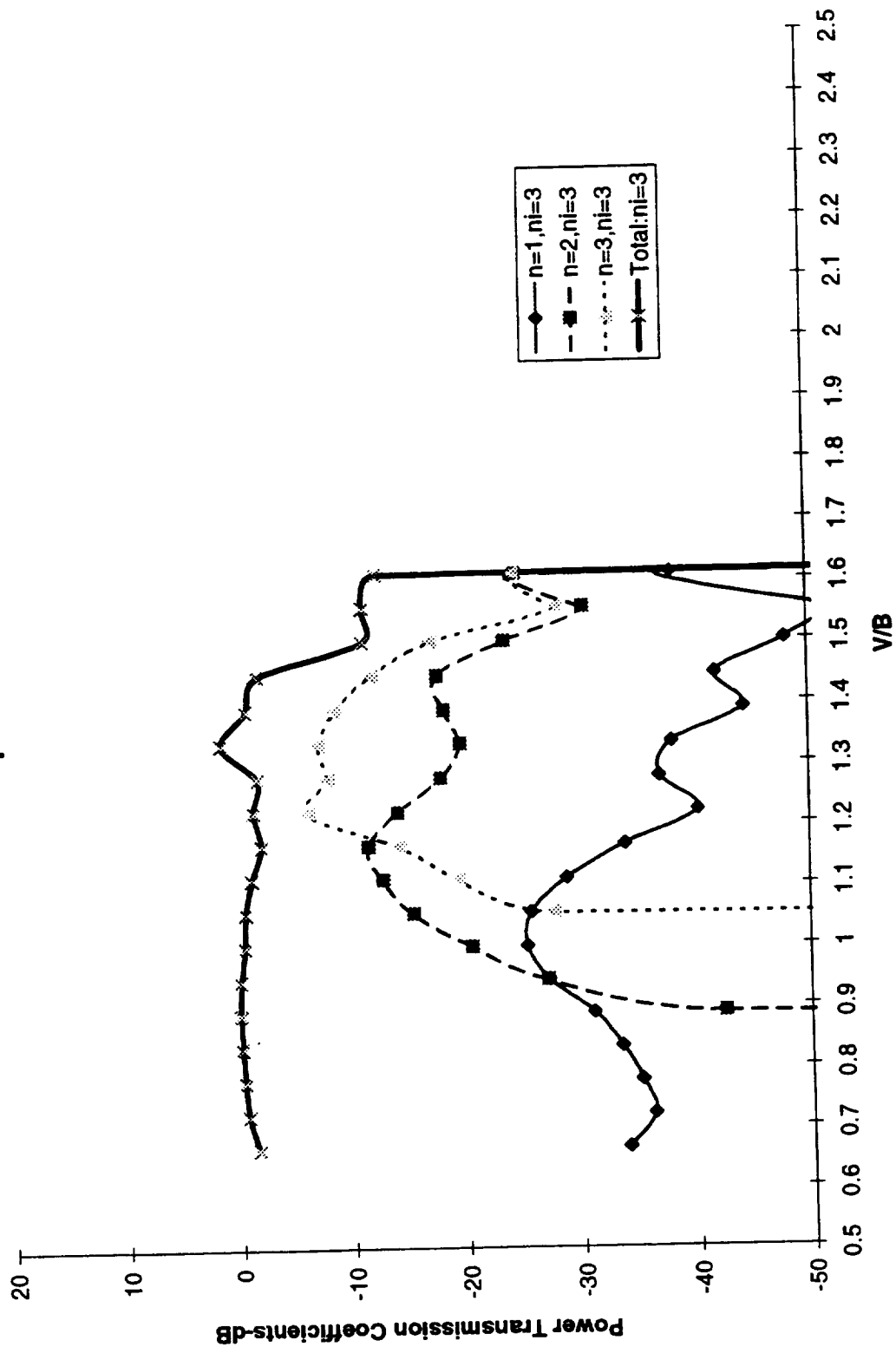
Output wave: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

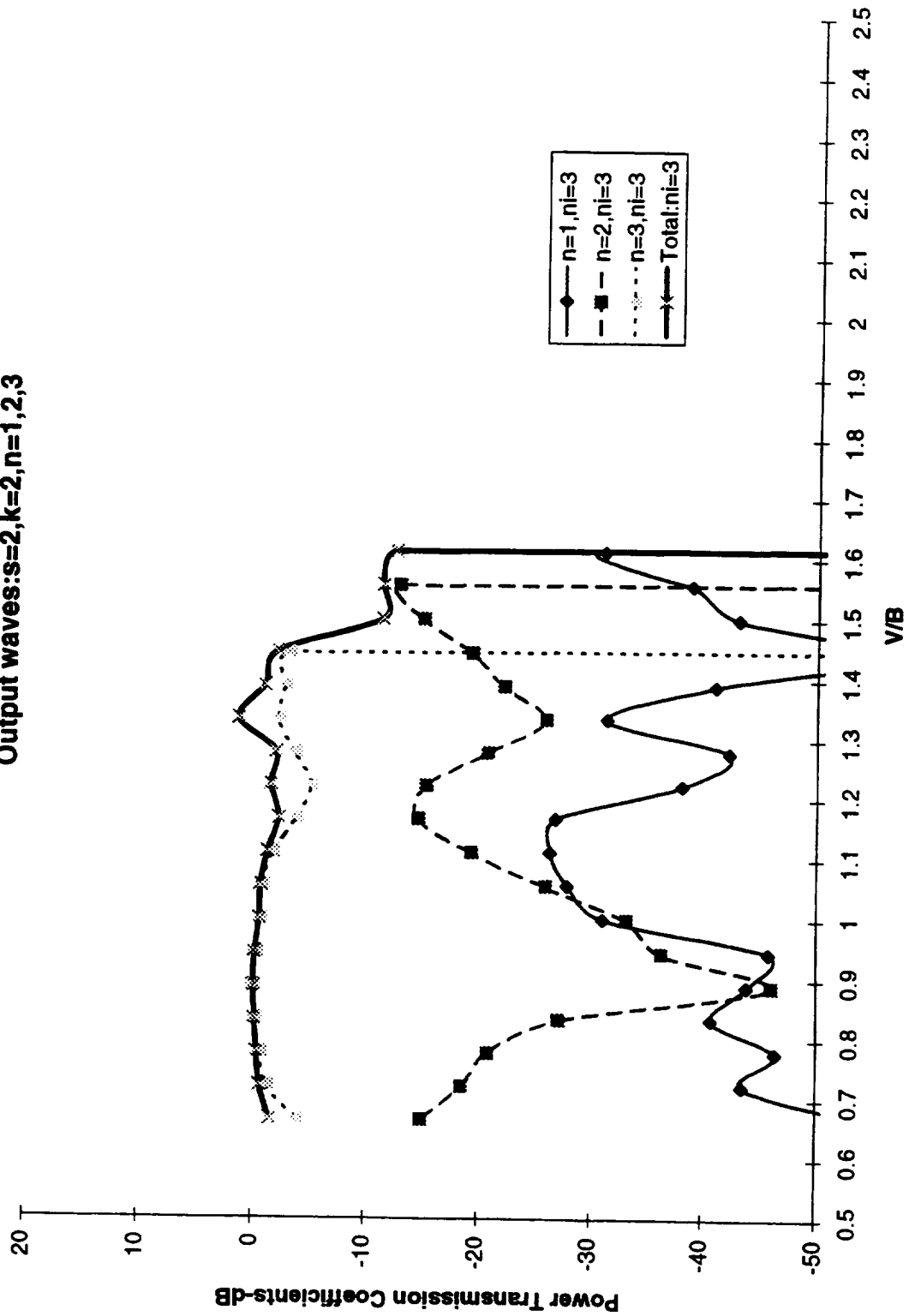
Output wave: $s=2, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

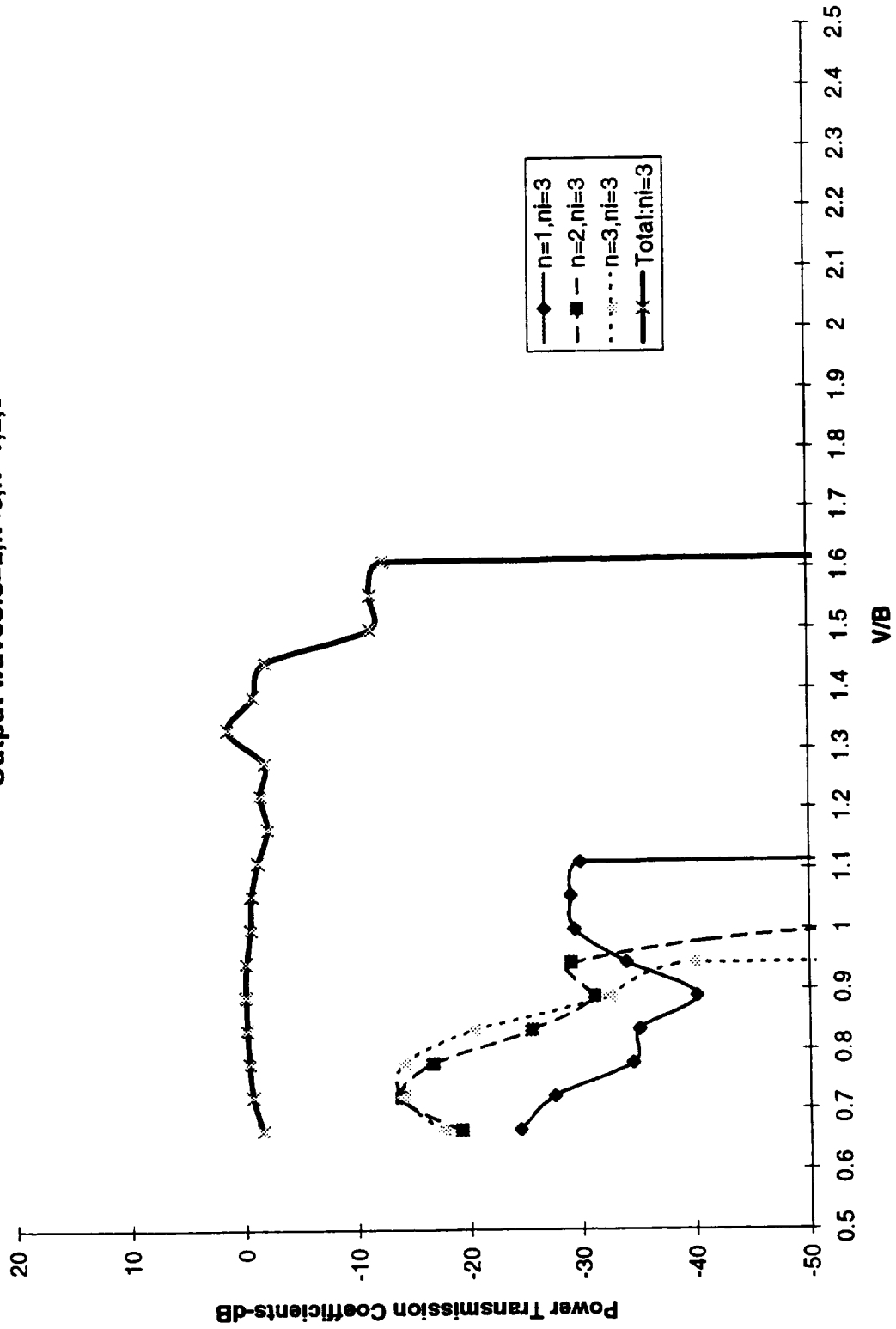
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

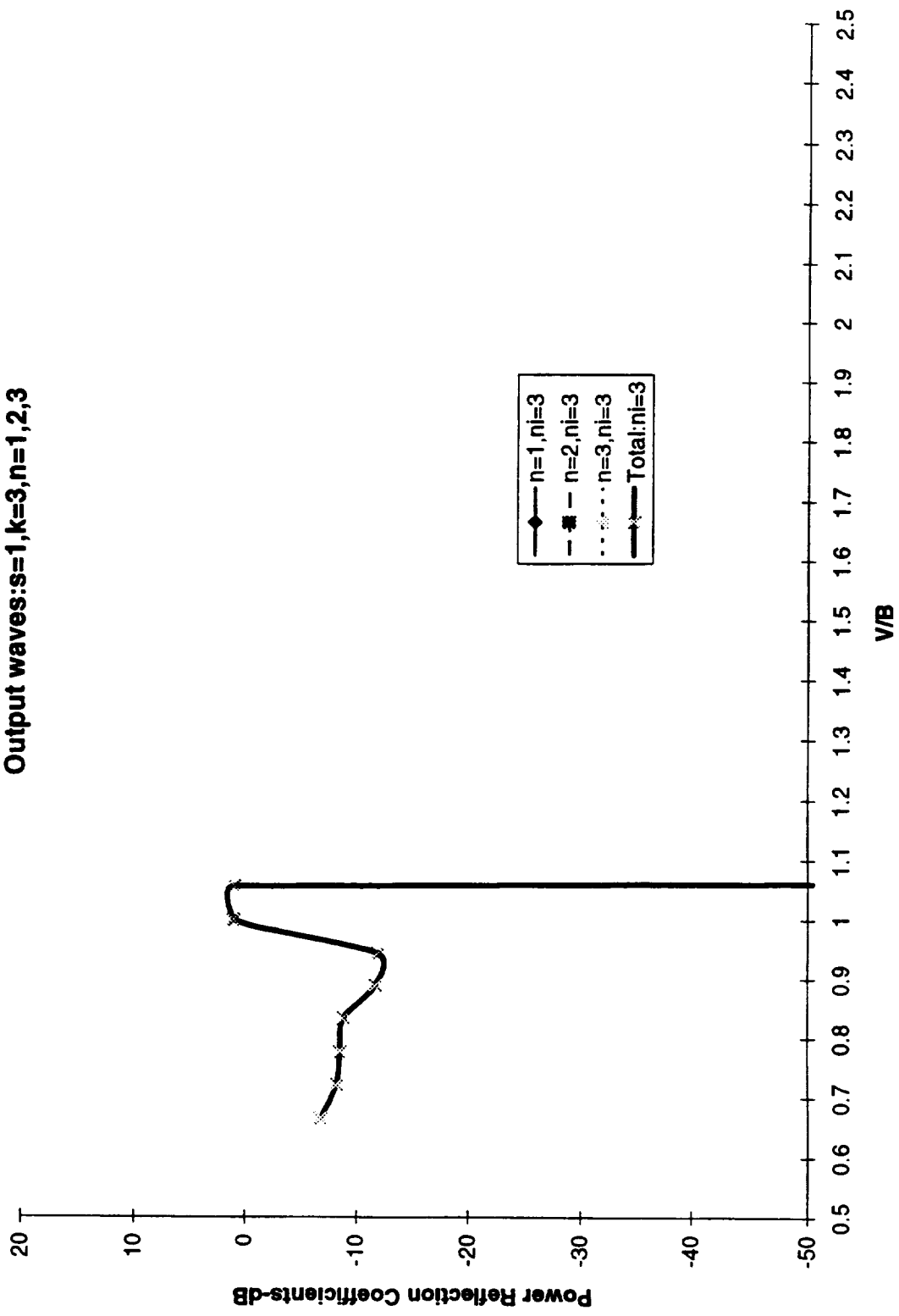
Output wave: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

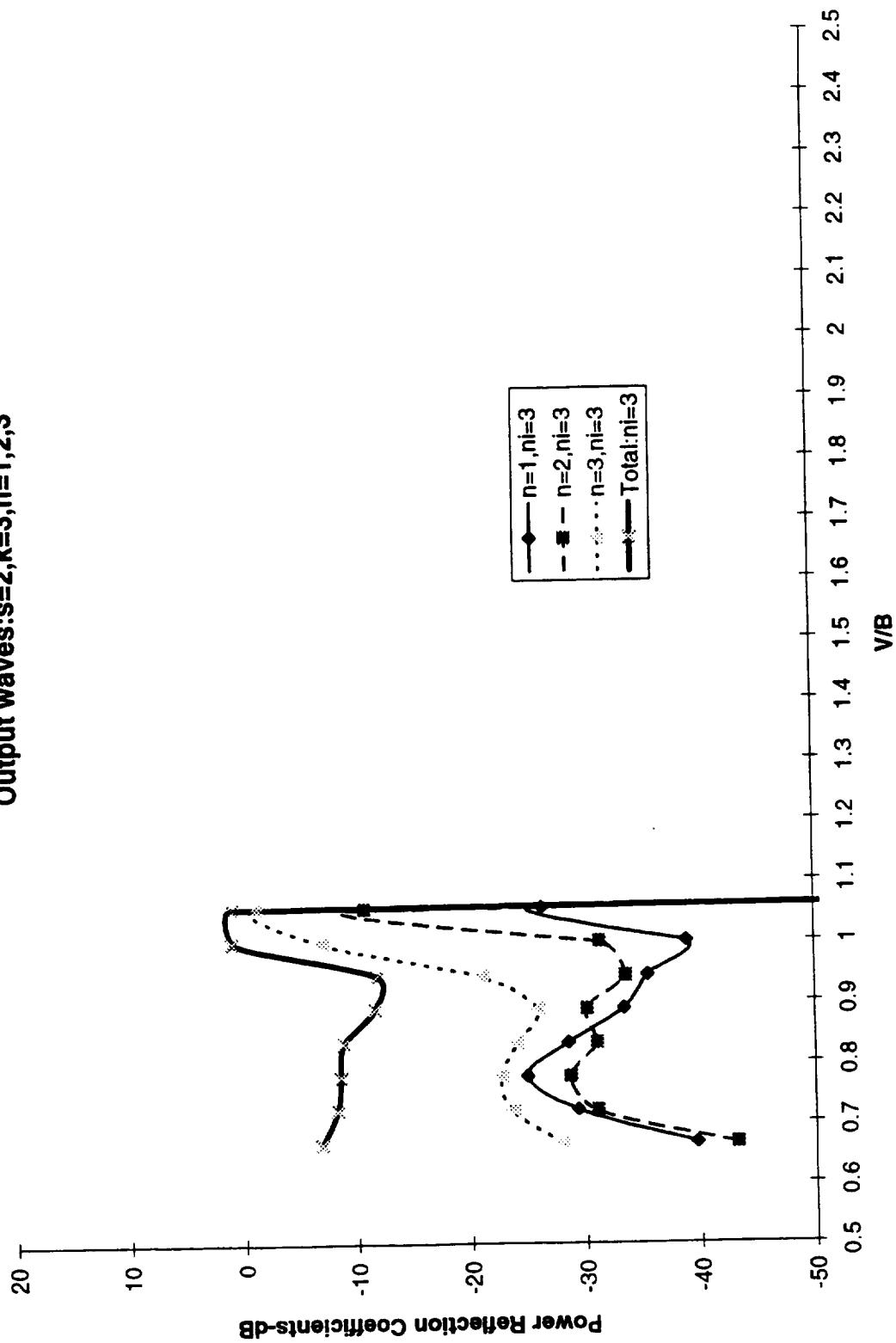
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

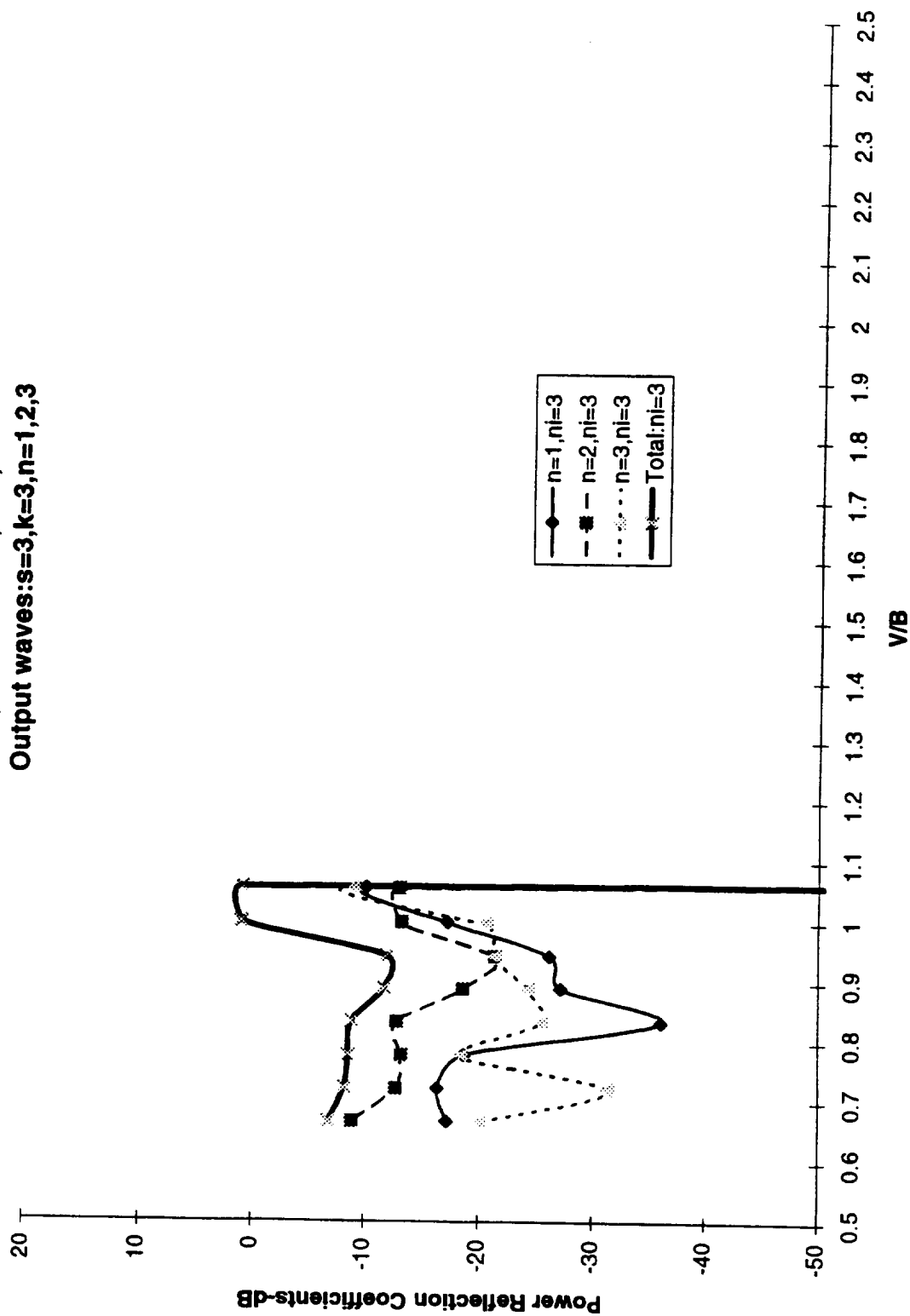
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

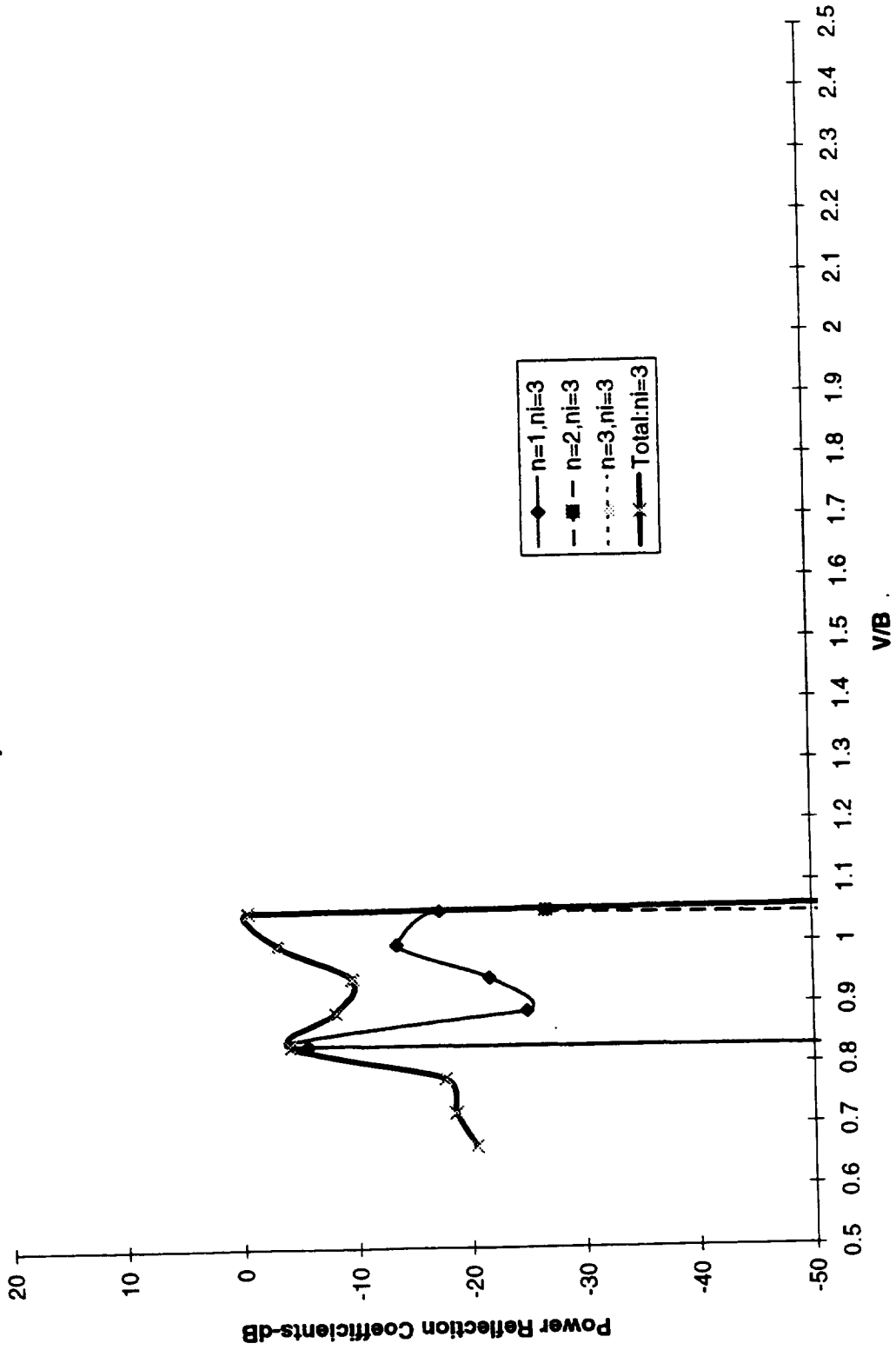
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

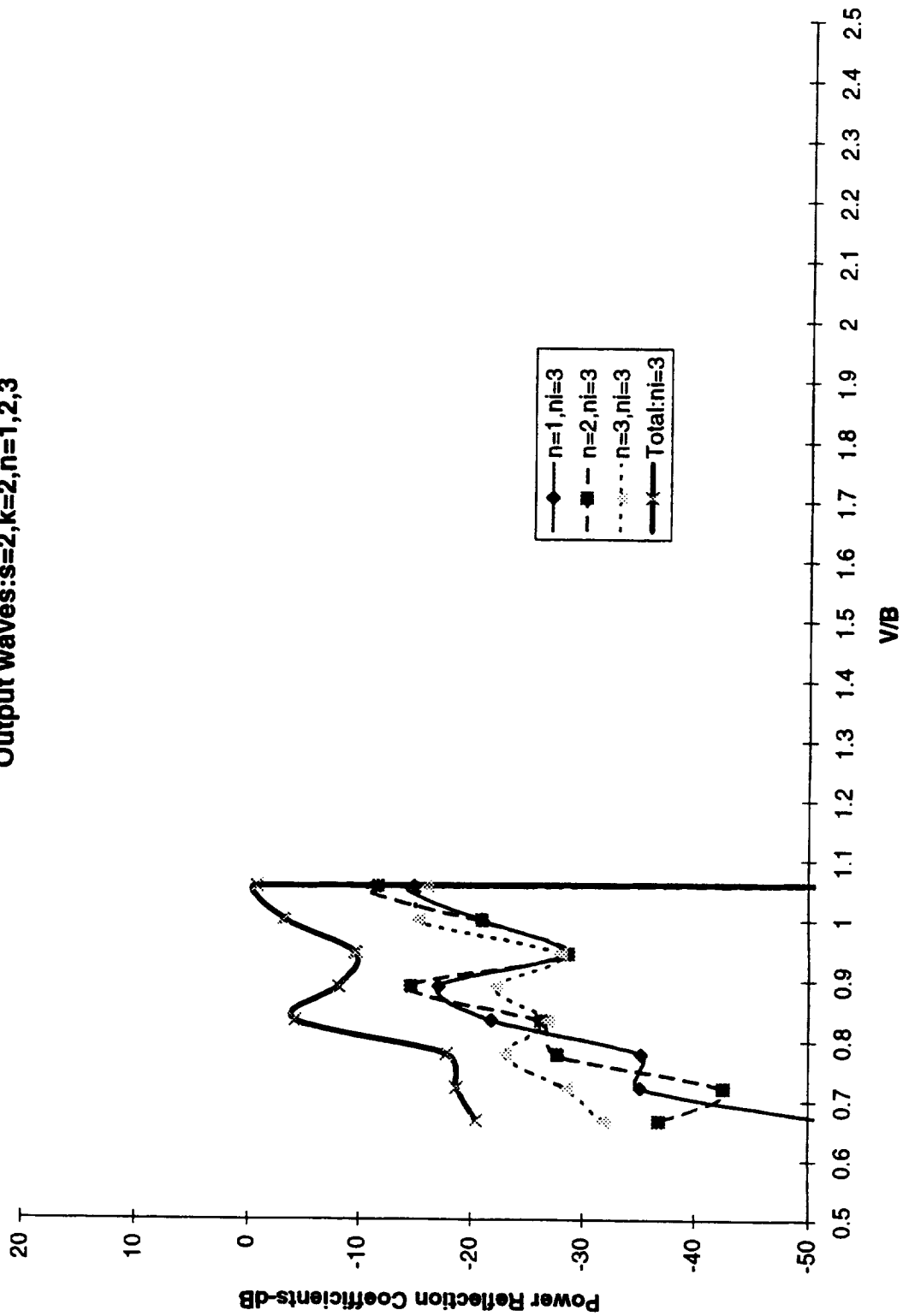
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

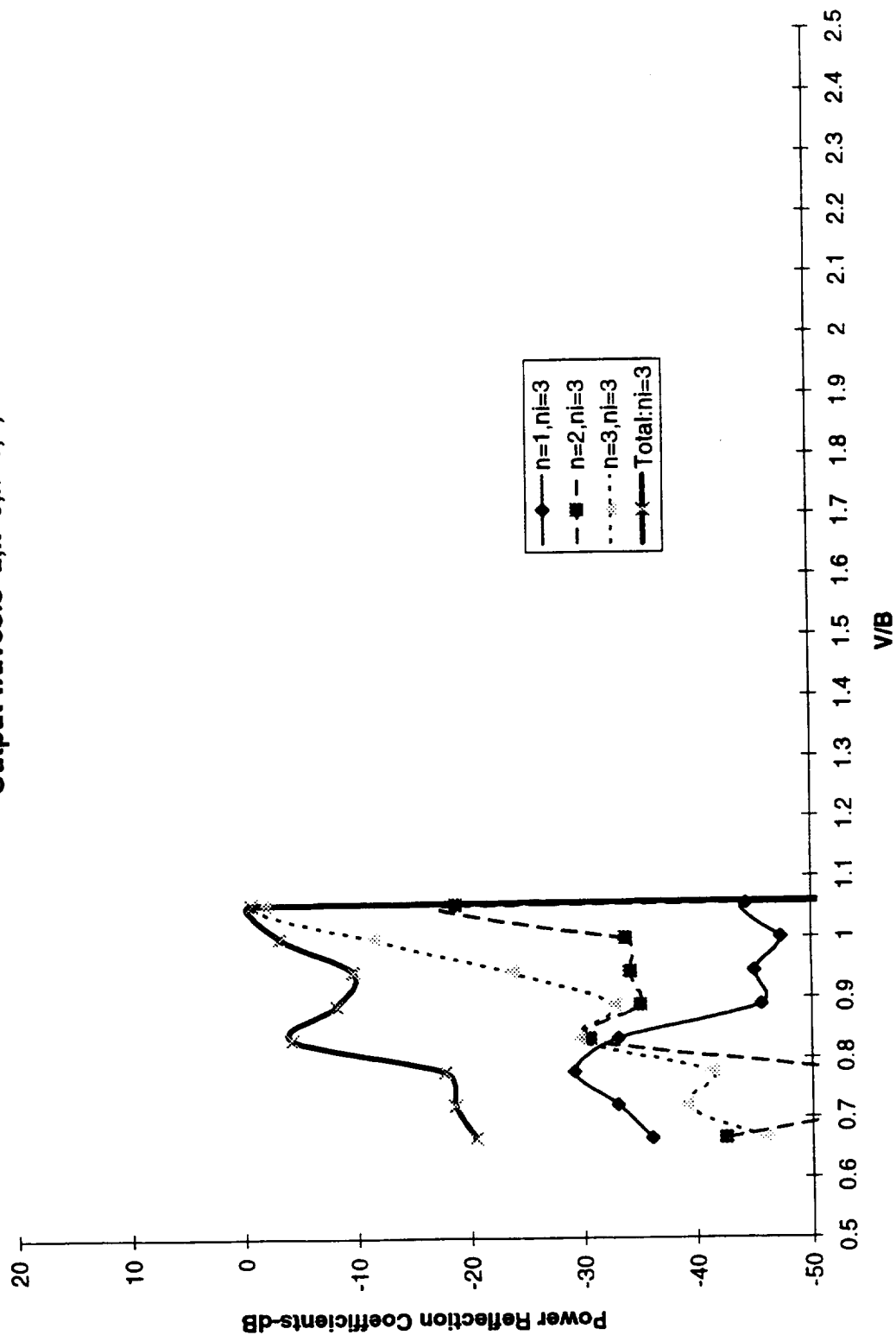
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

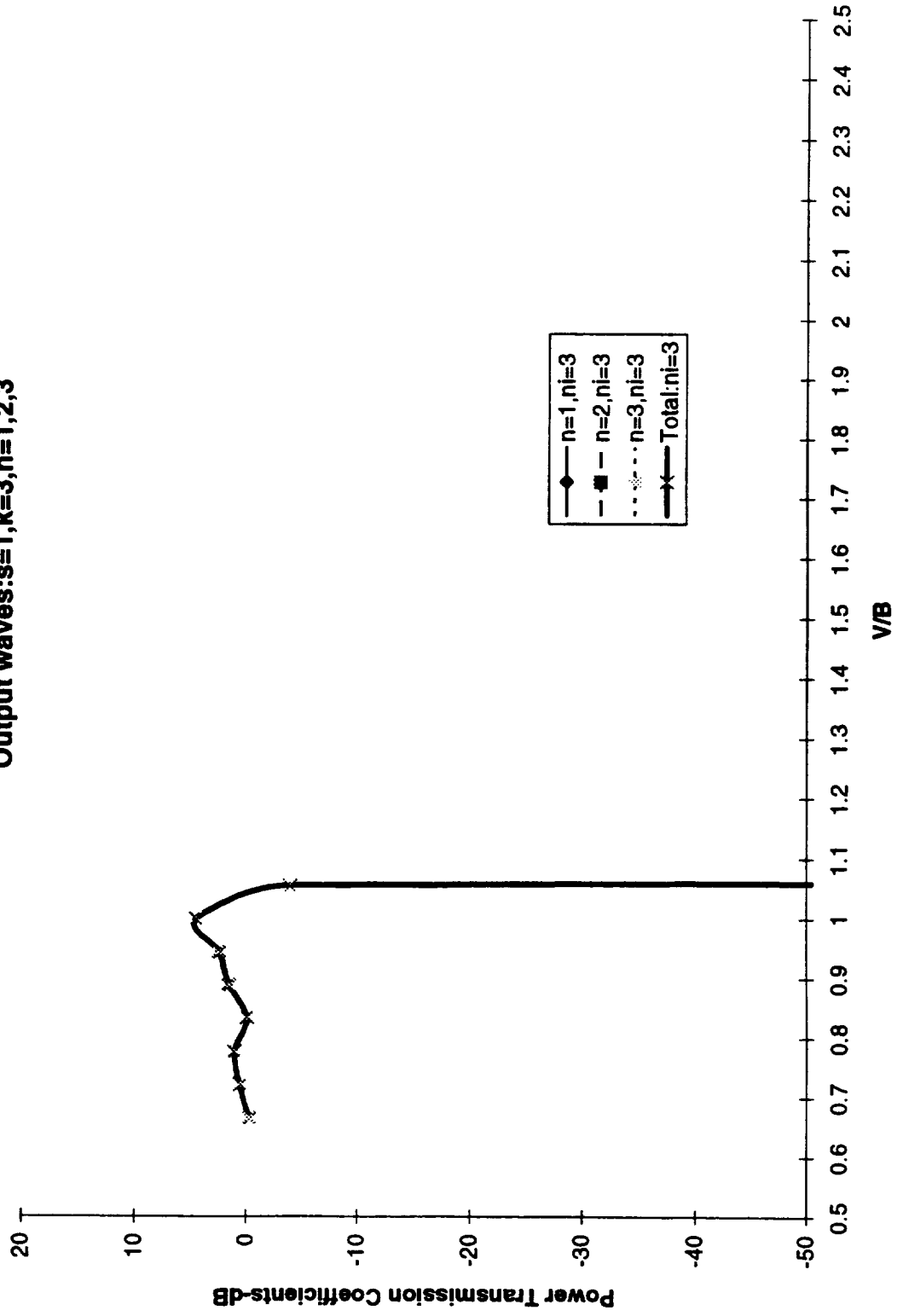
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_l=2, k_l=3, n_l=3$

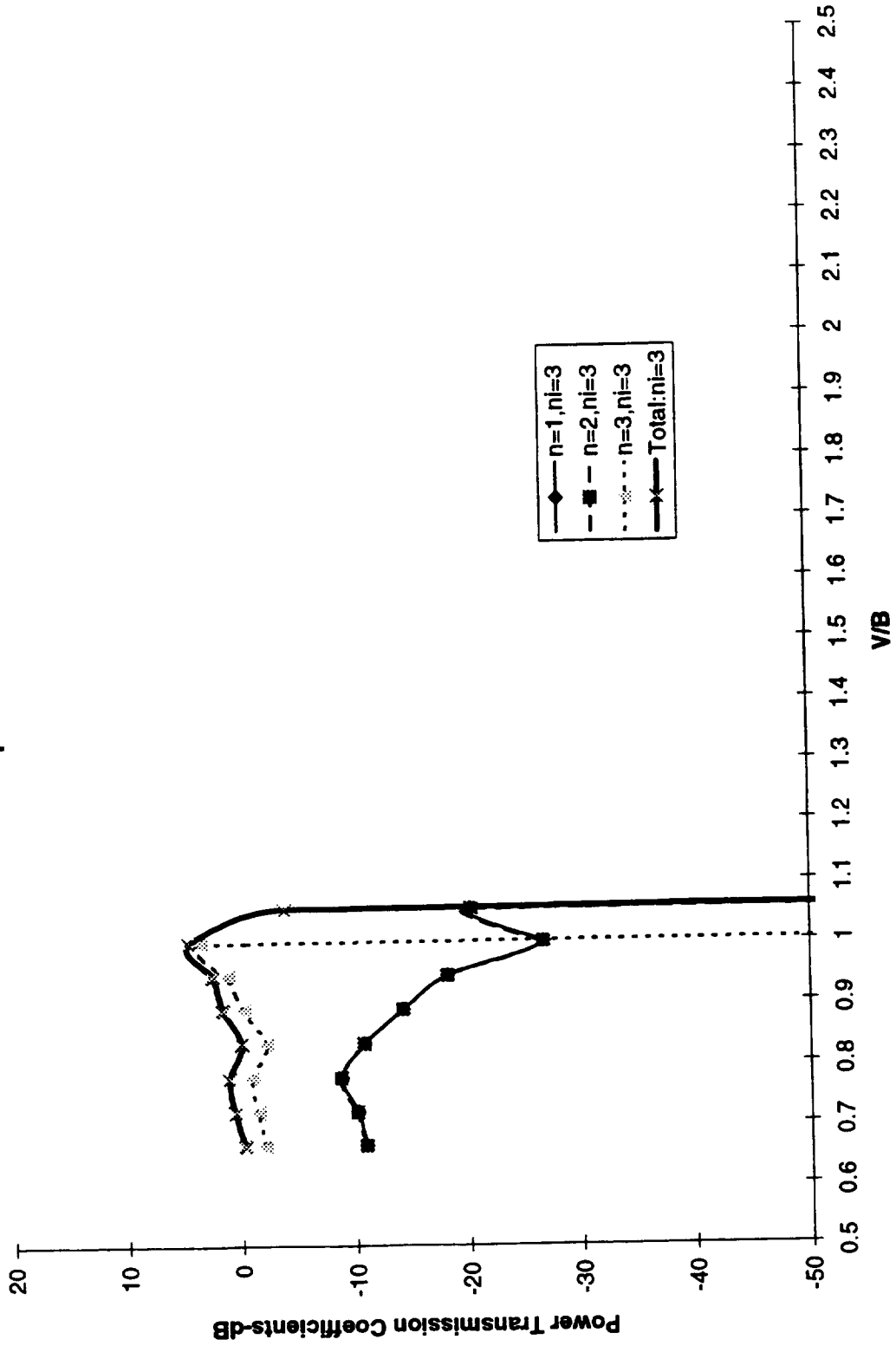
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

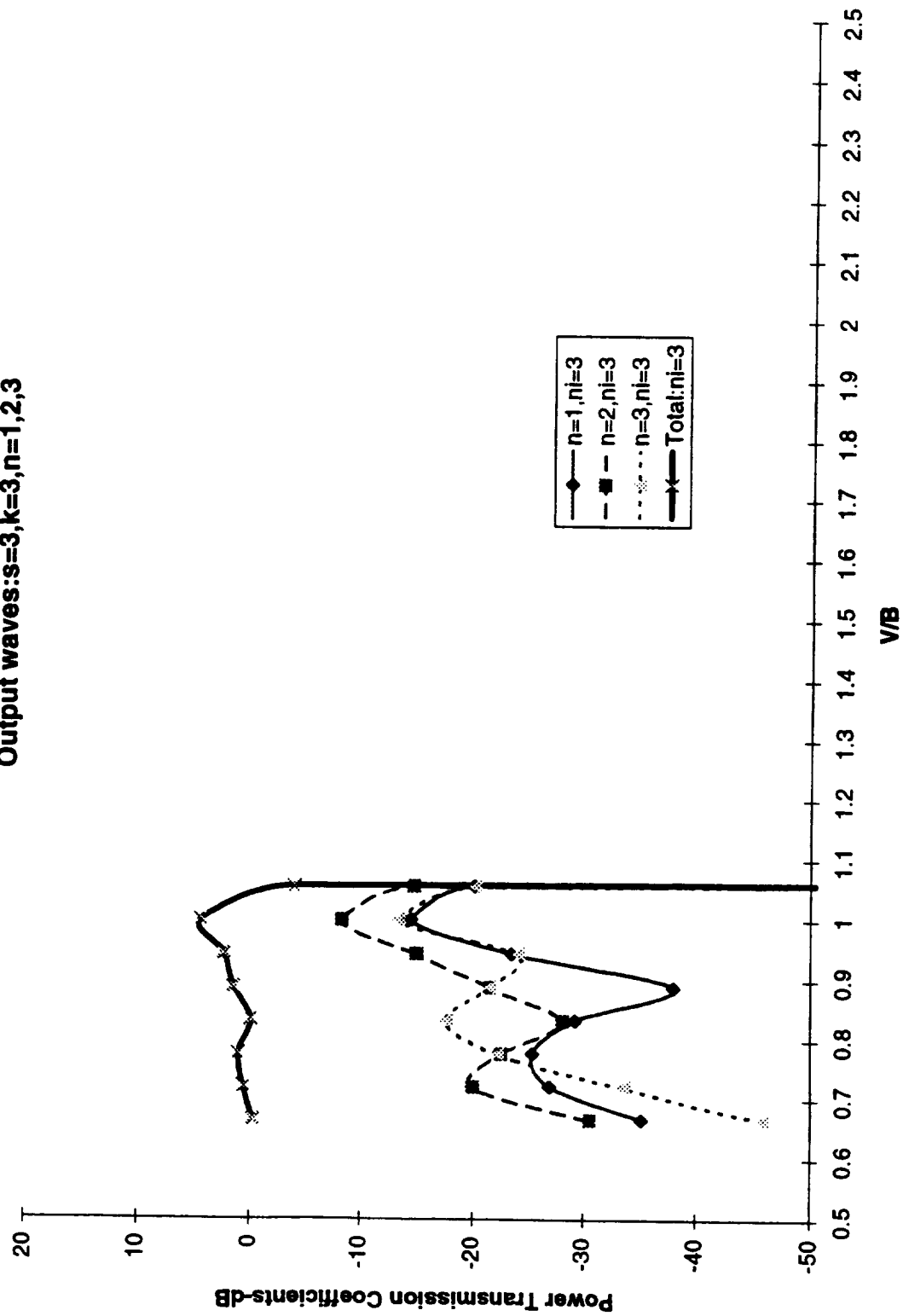
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_l=2, k_l=3, n_l=3$

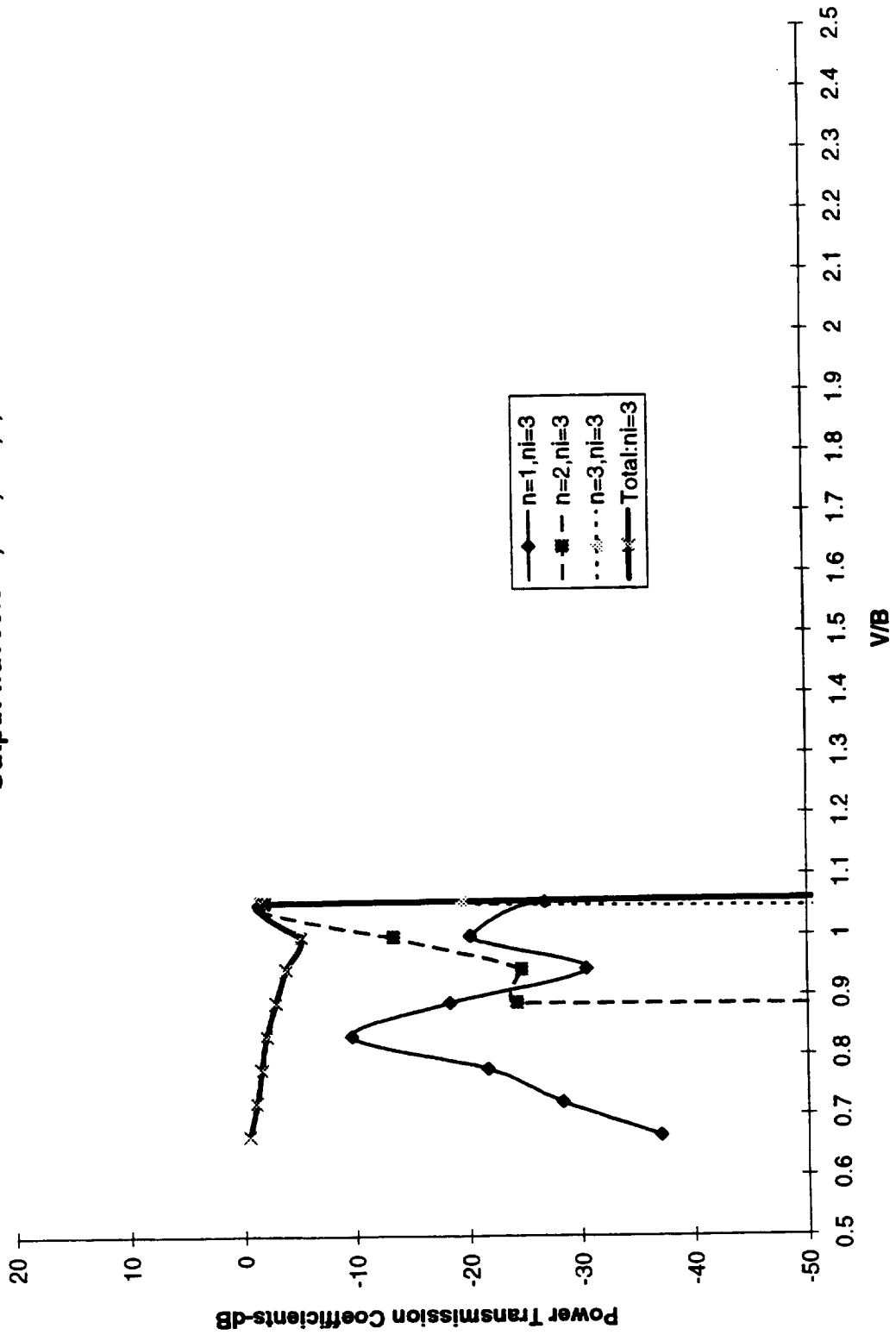
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_l=2, k_l=3, n_l=3$

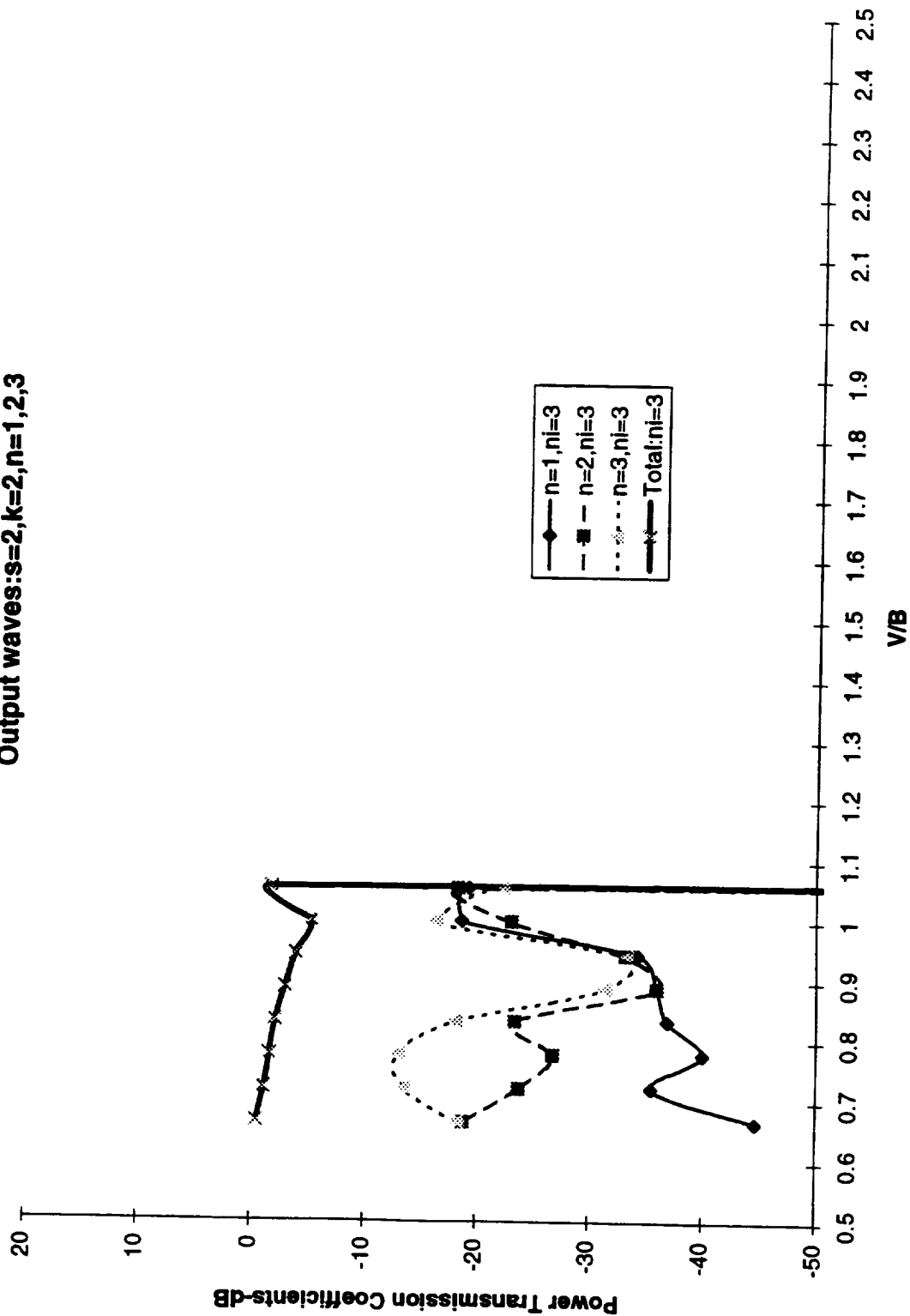
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

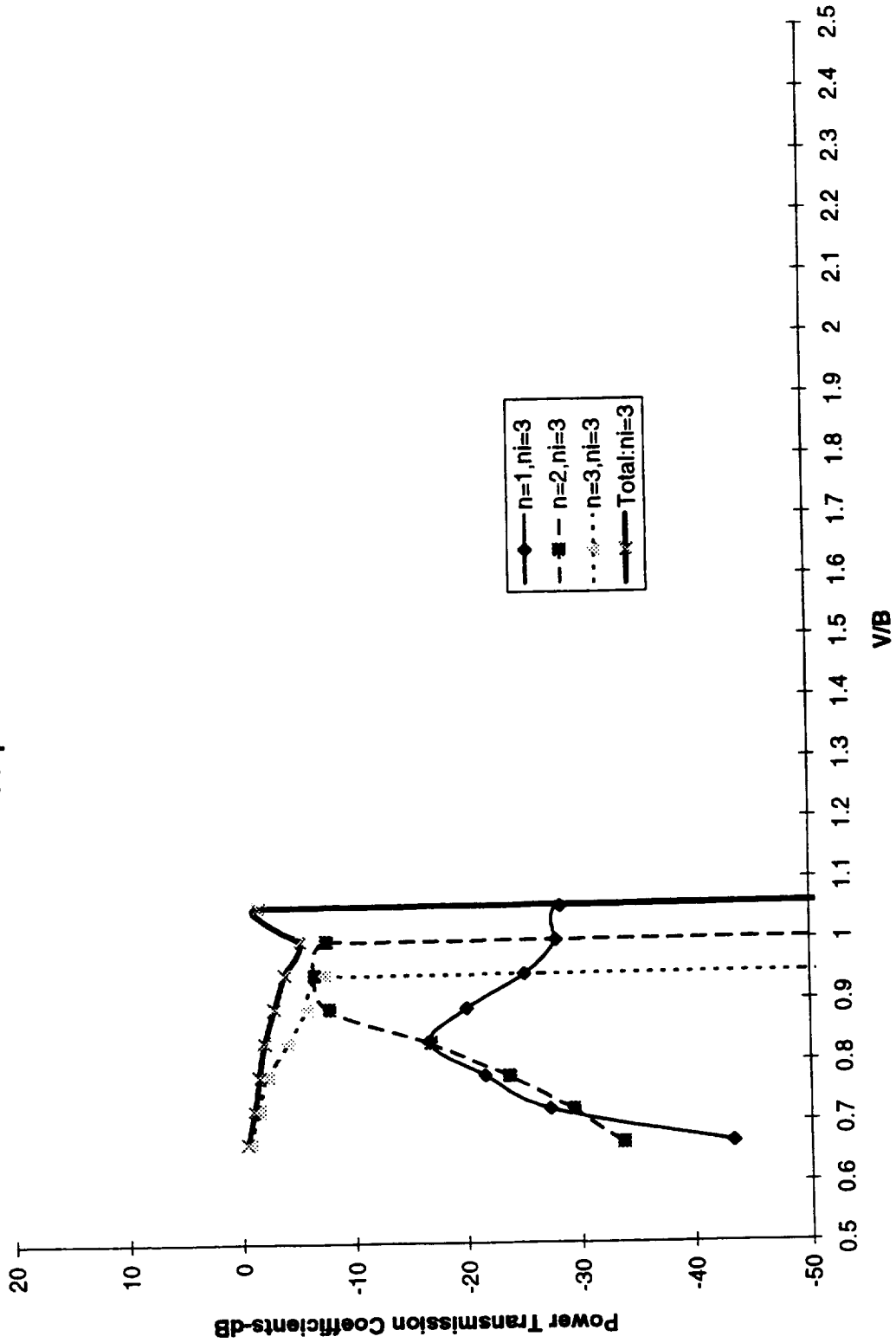
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

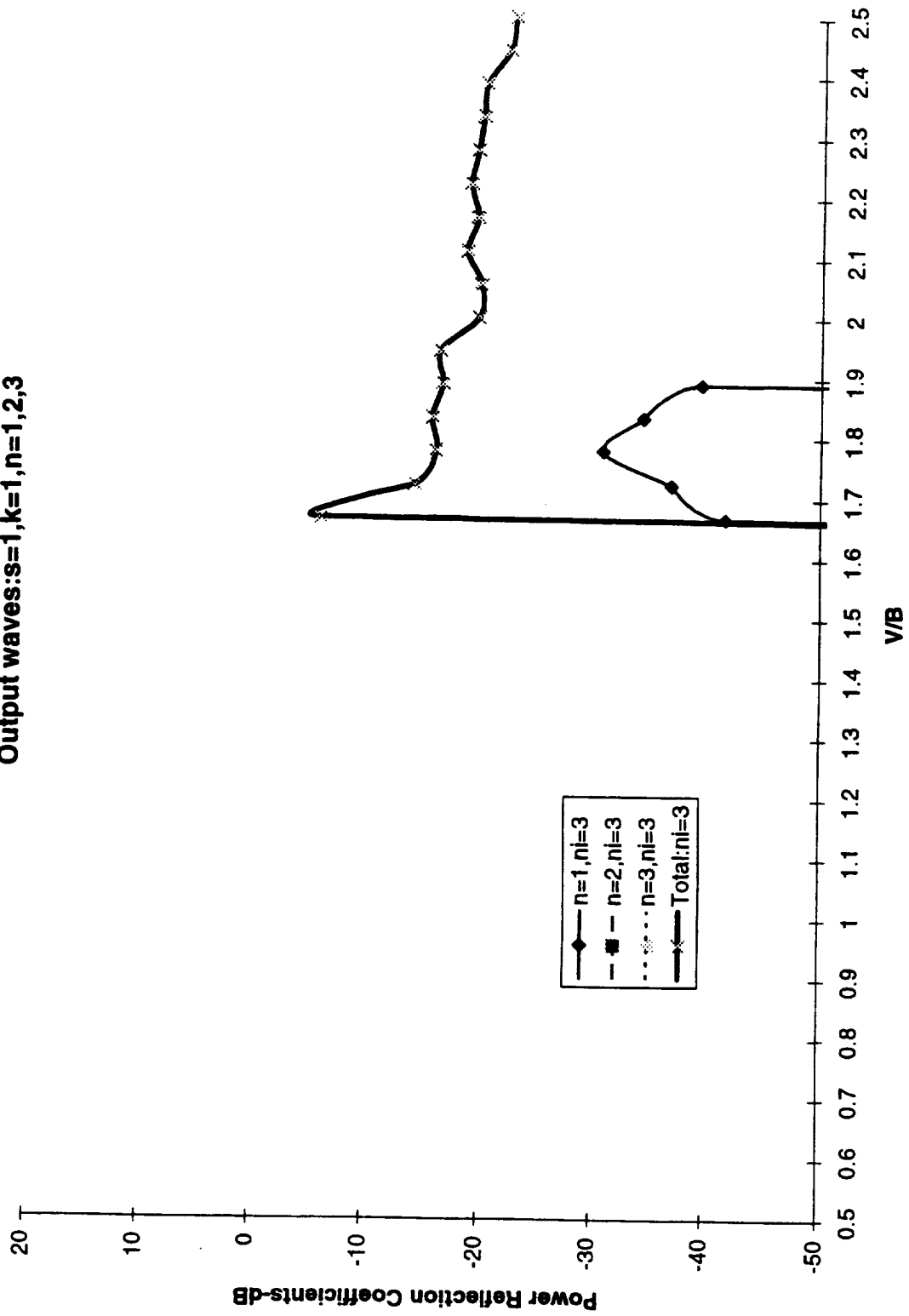
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

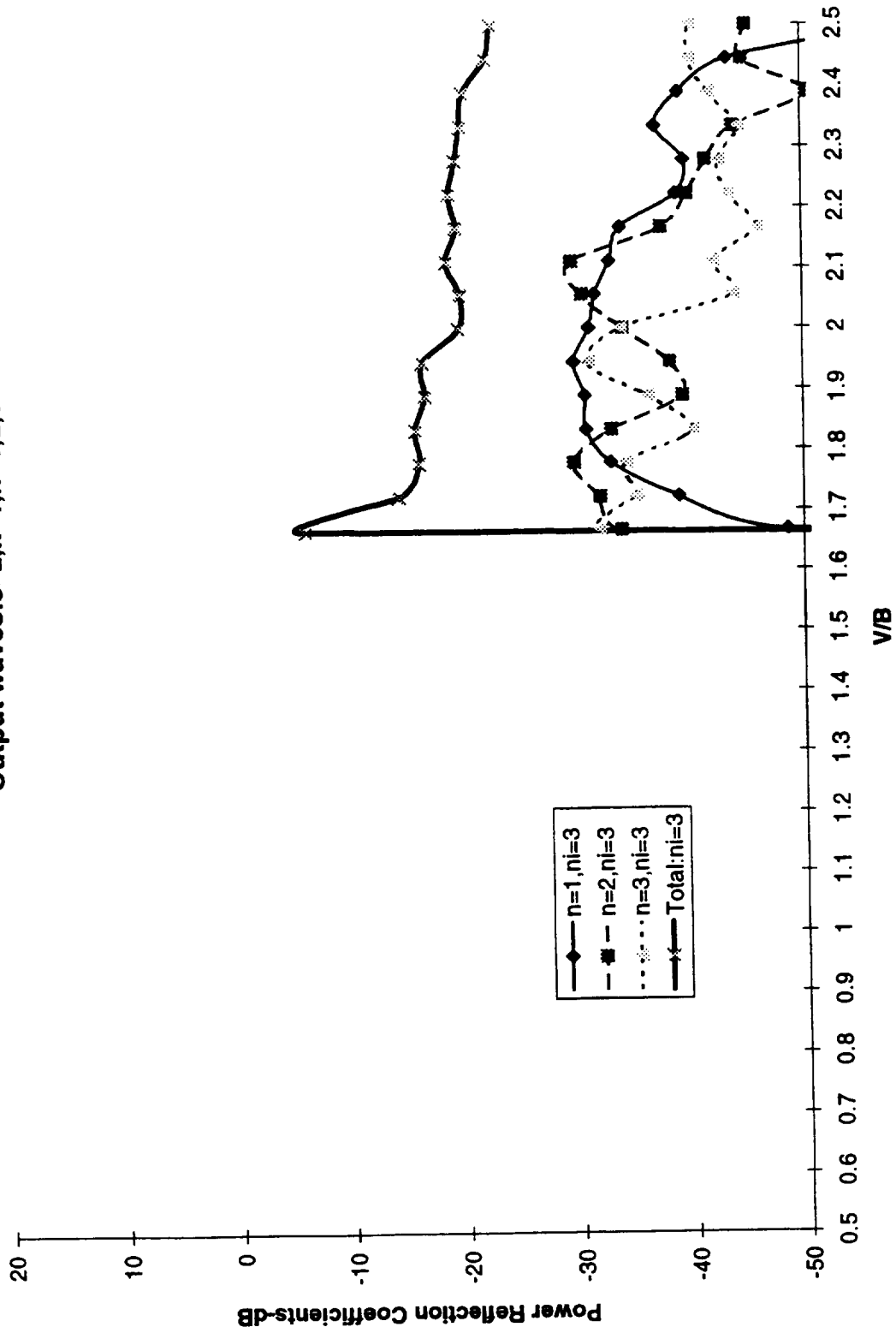
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

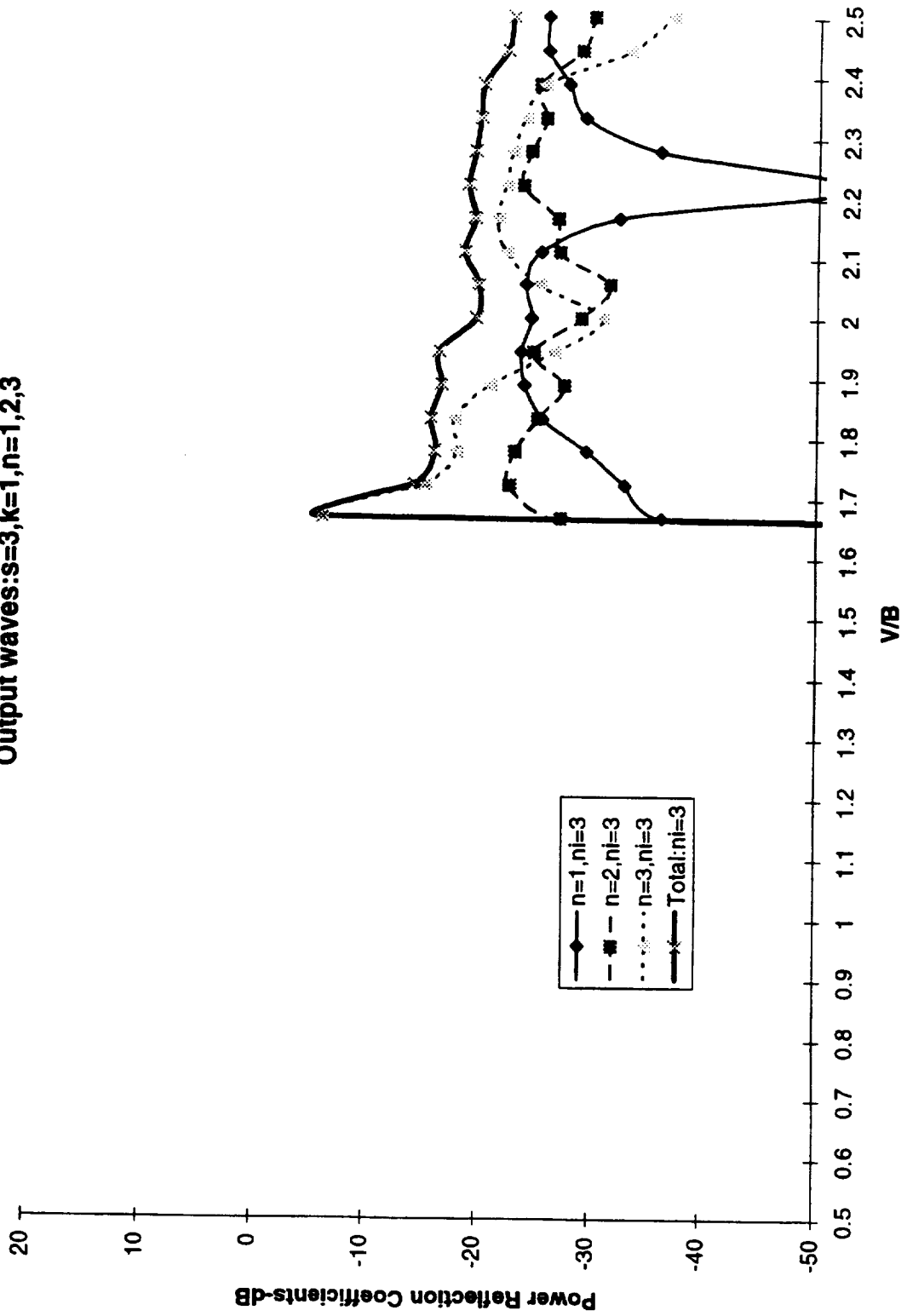
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

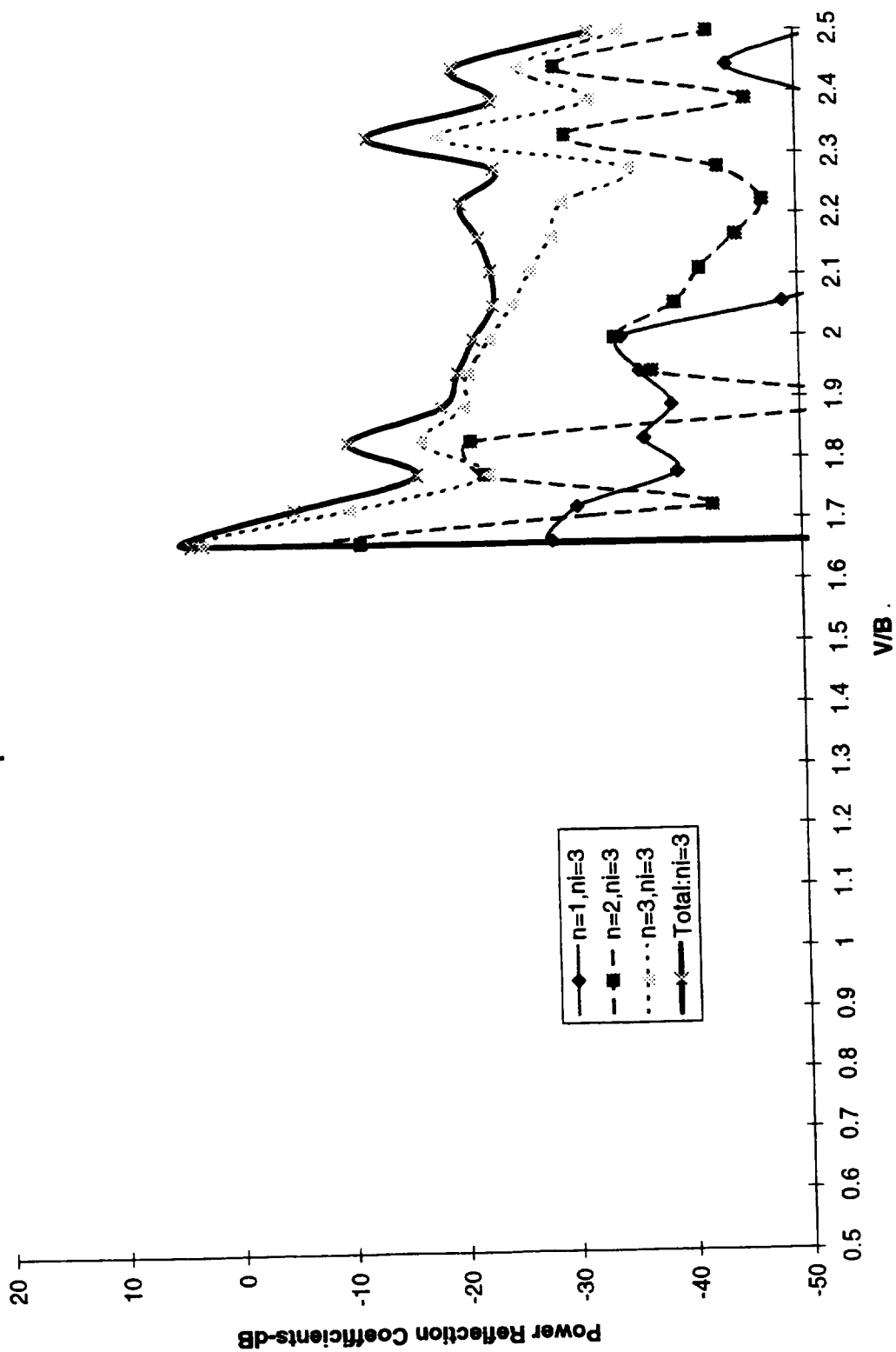
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

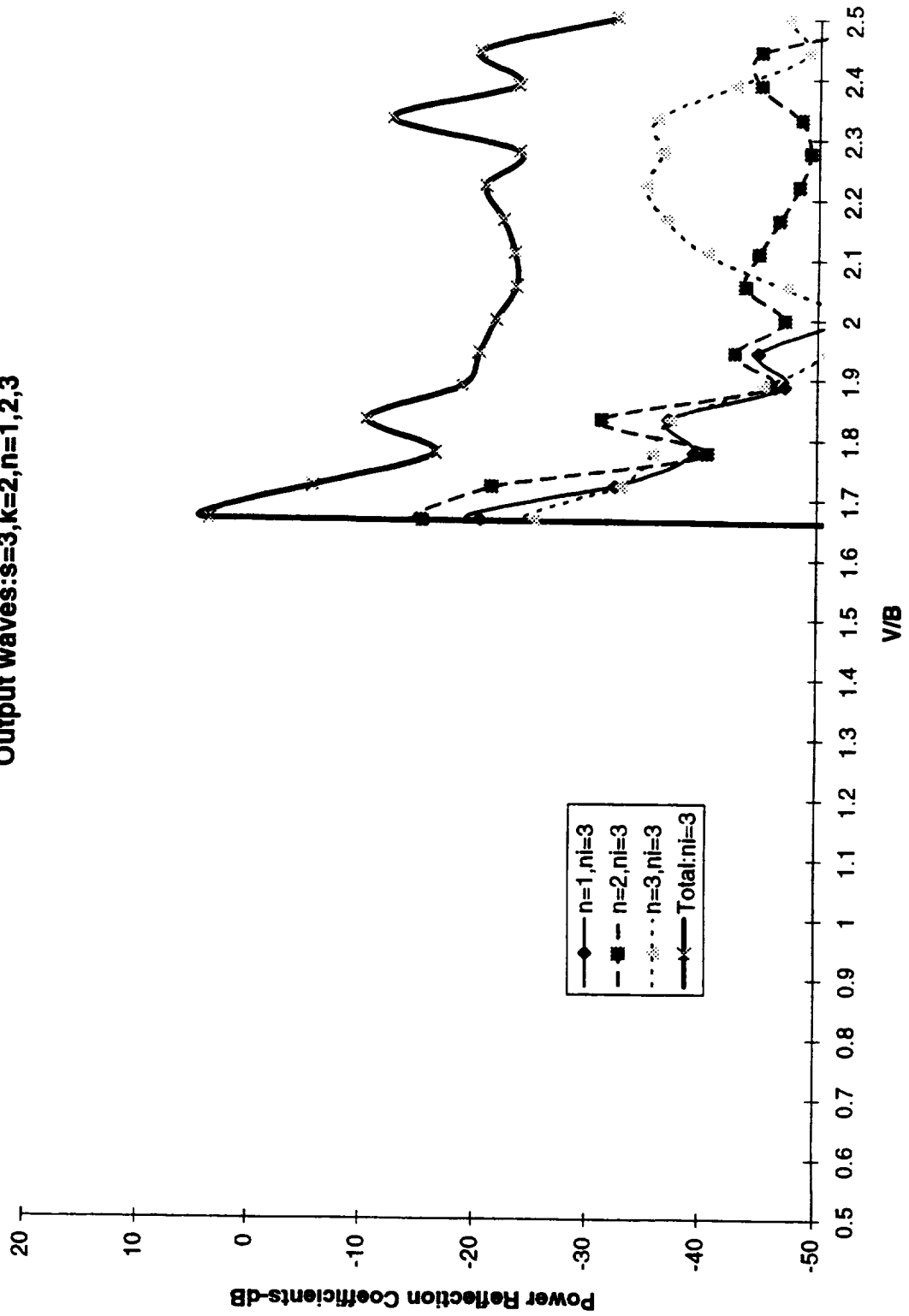
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

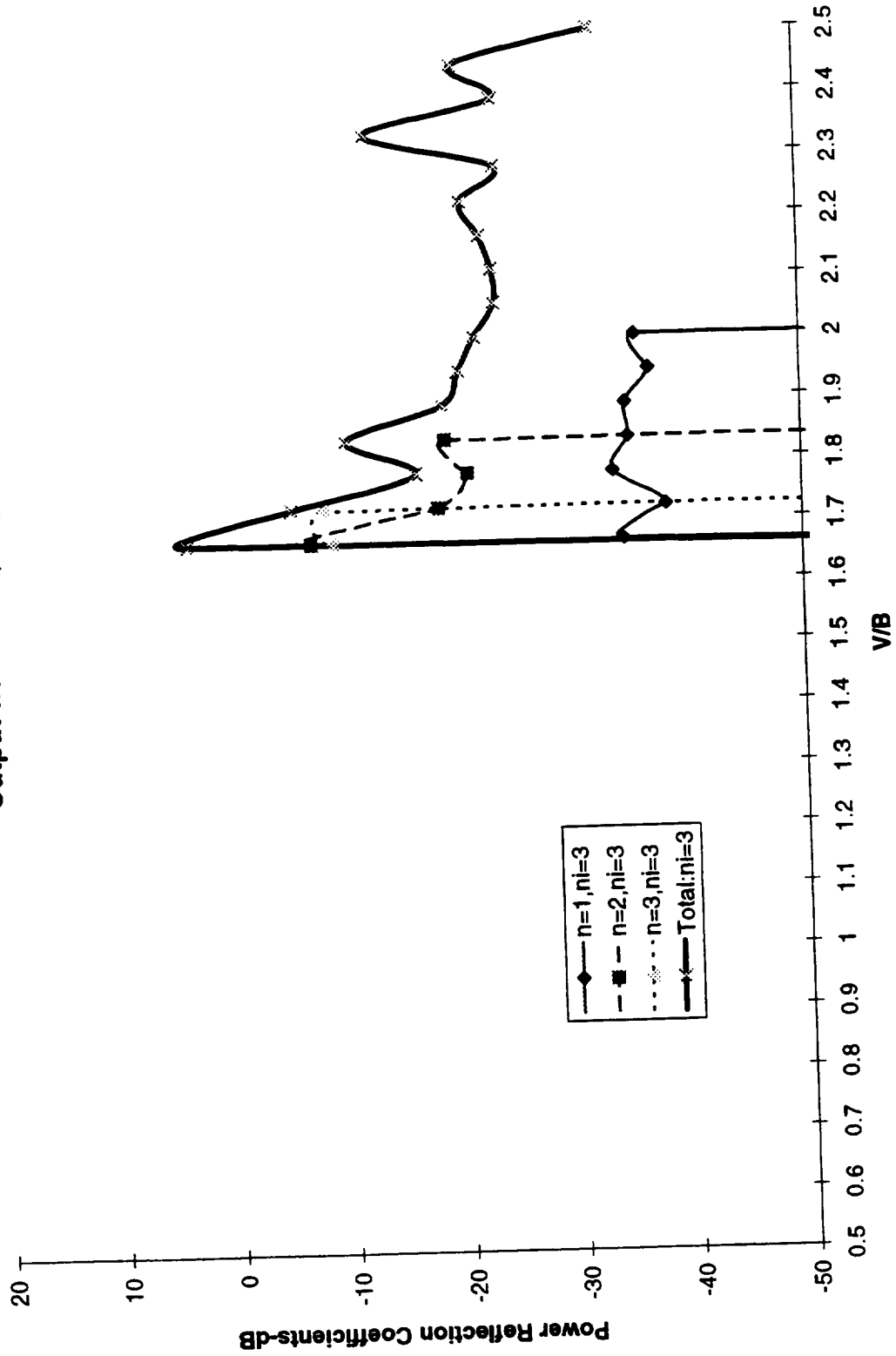
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

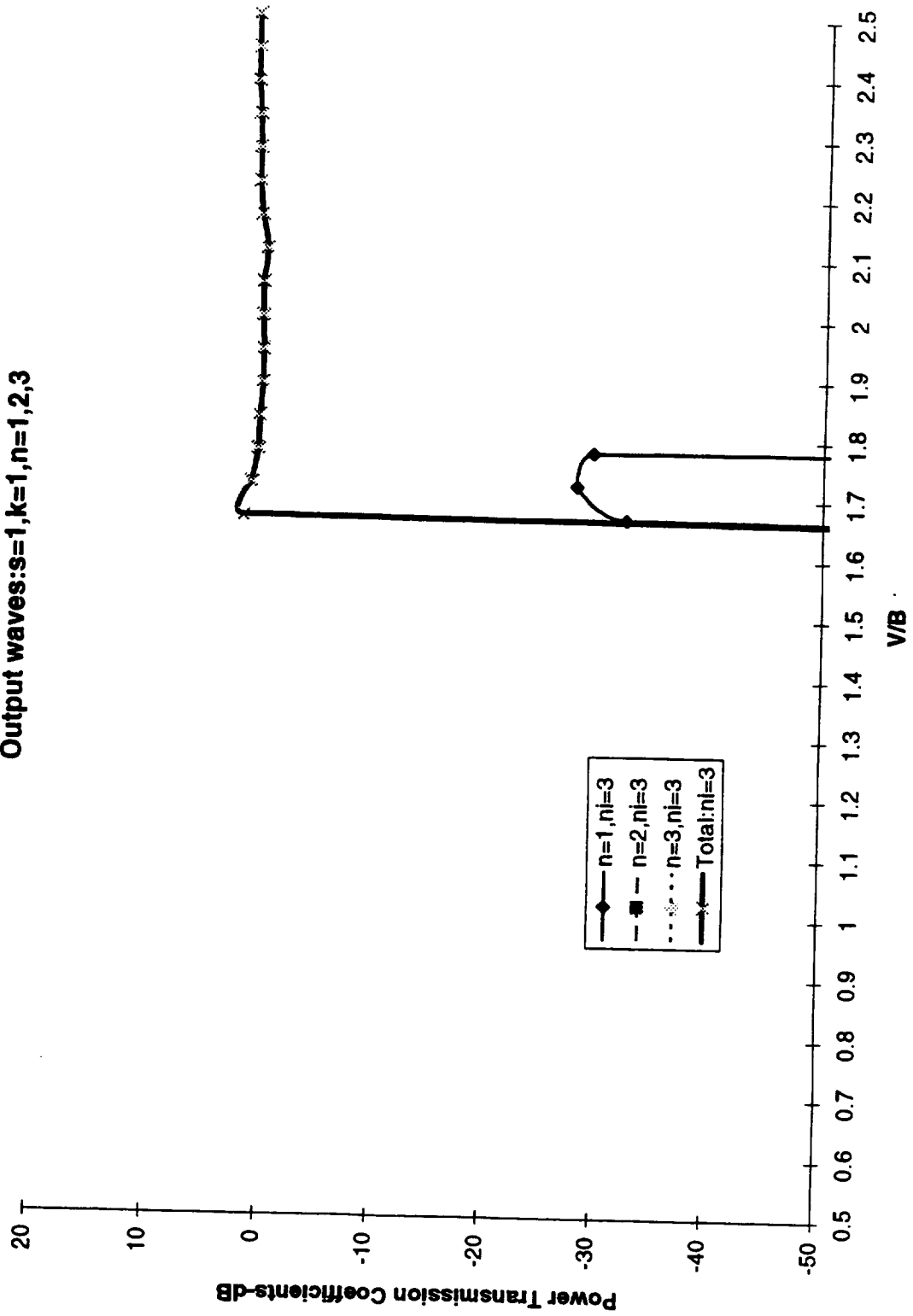
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

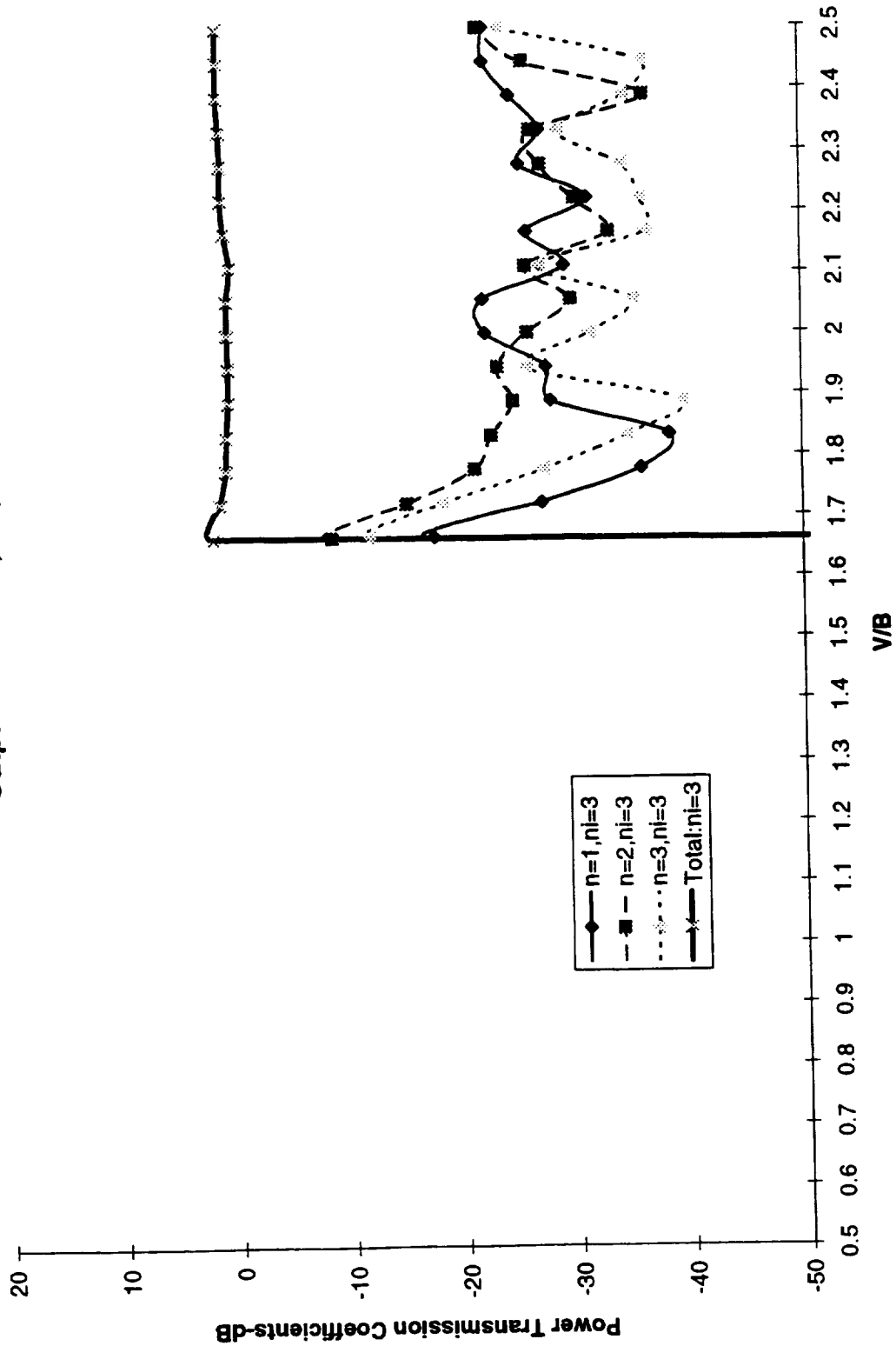
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

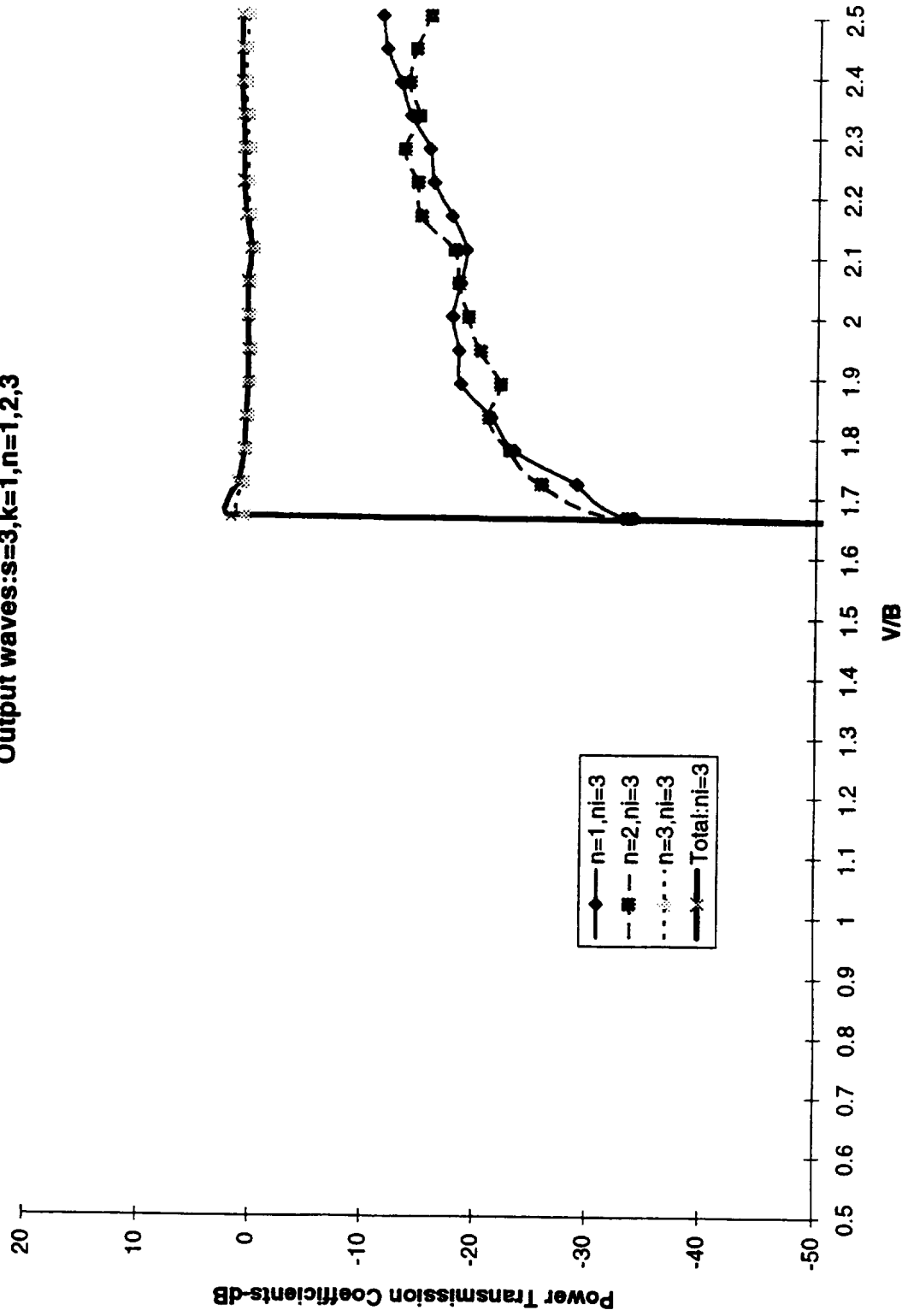
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

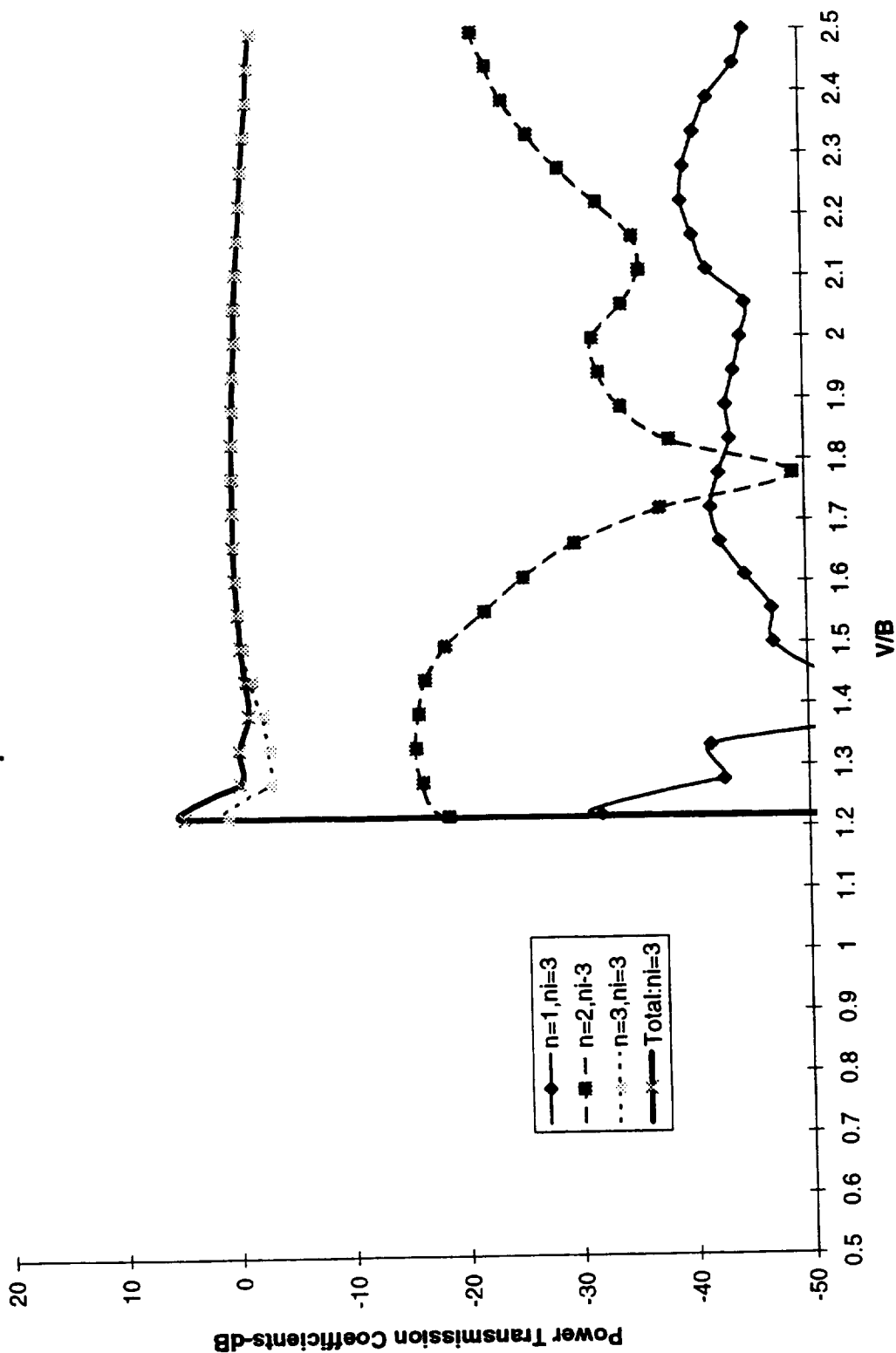
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

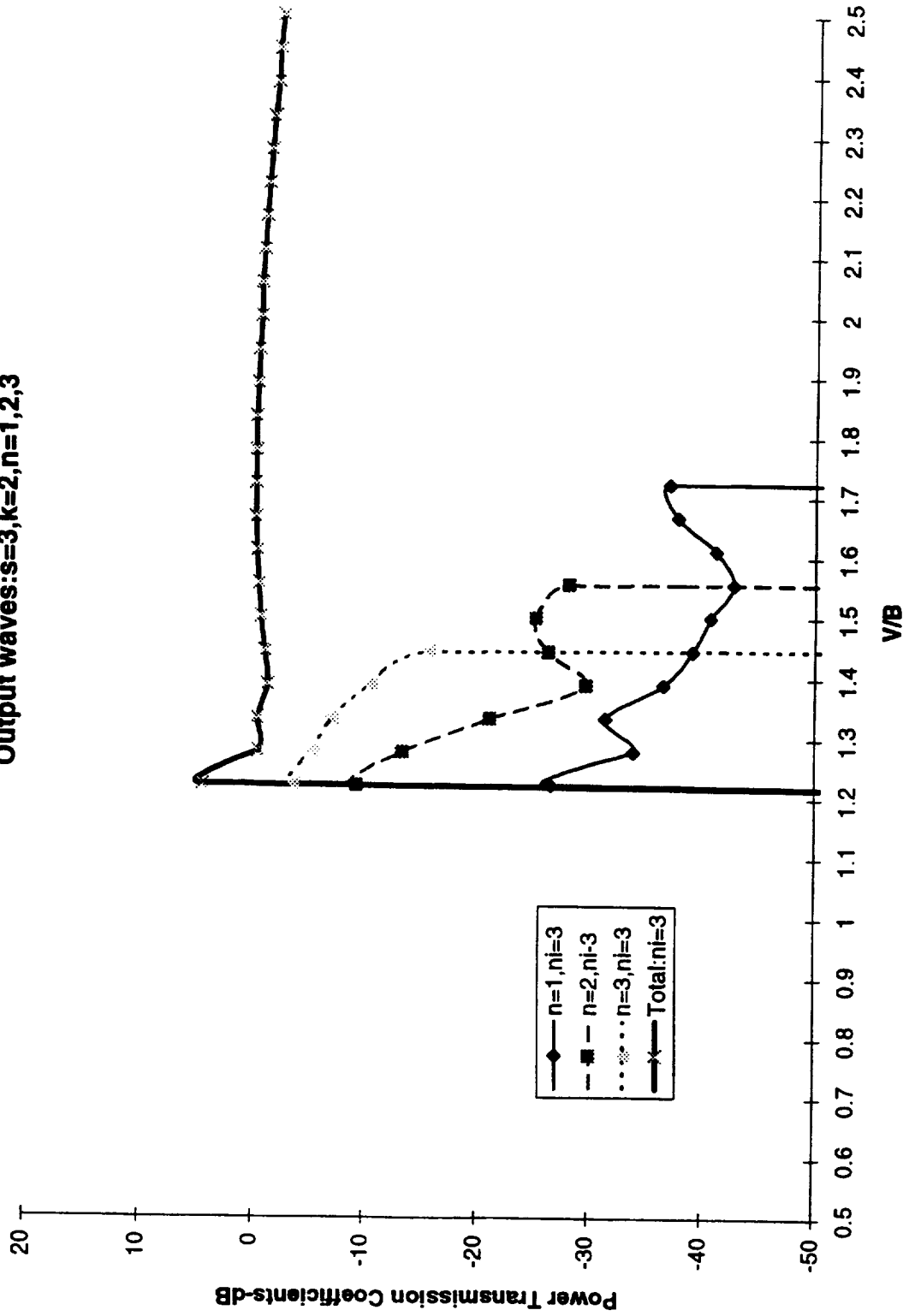
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

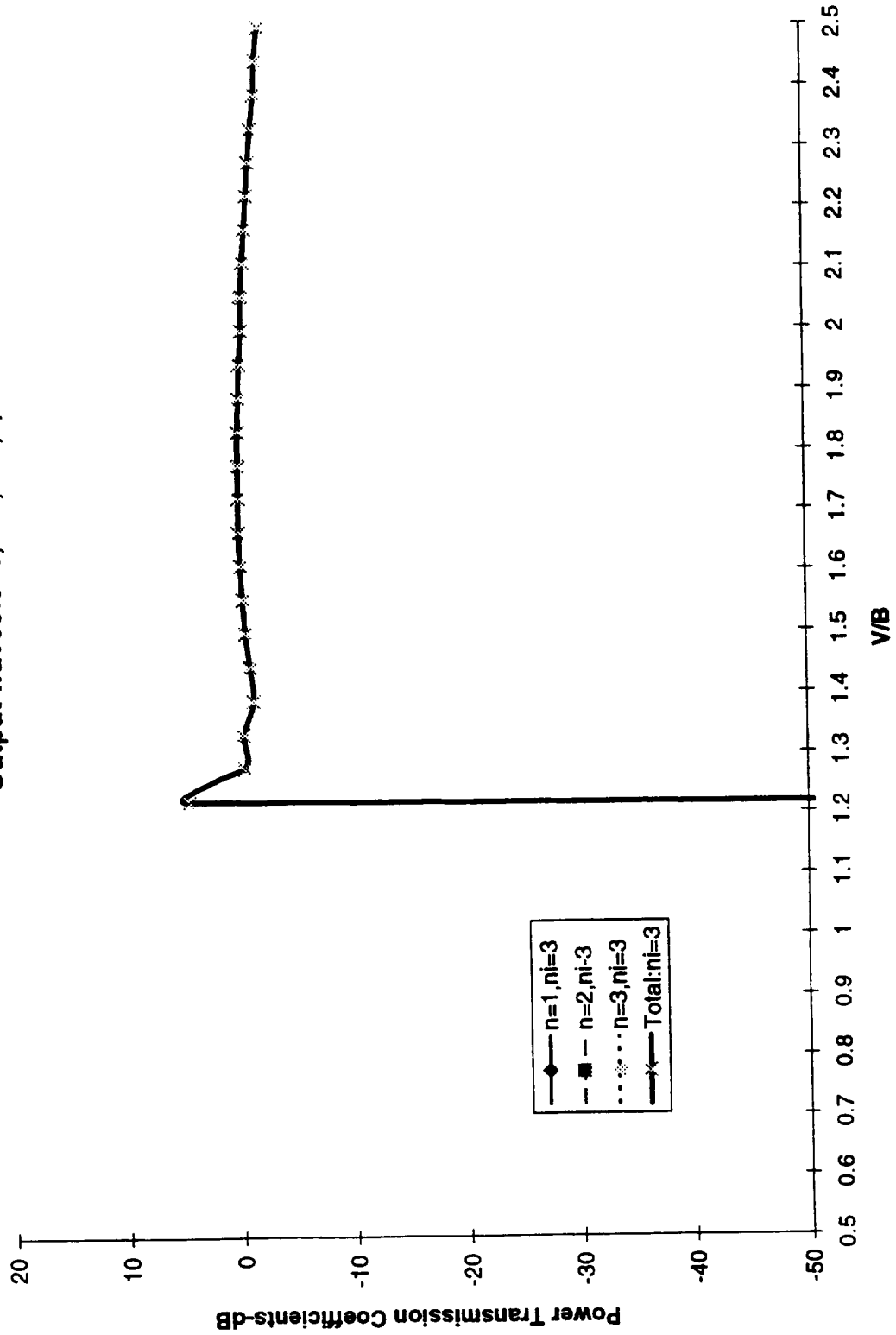
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

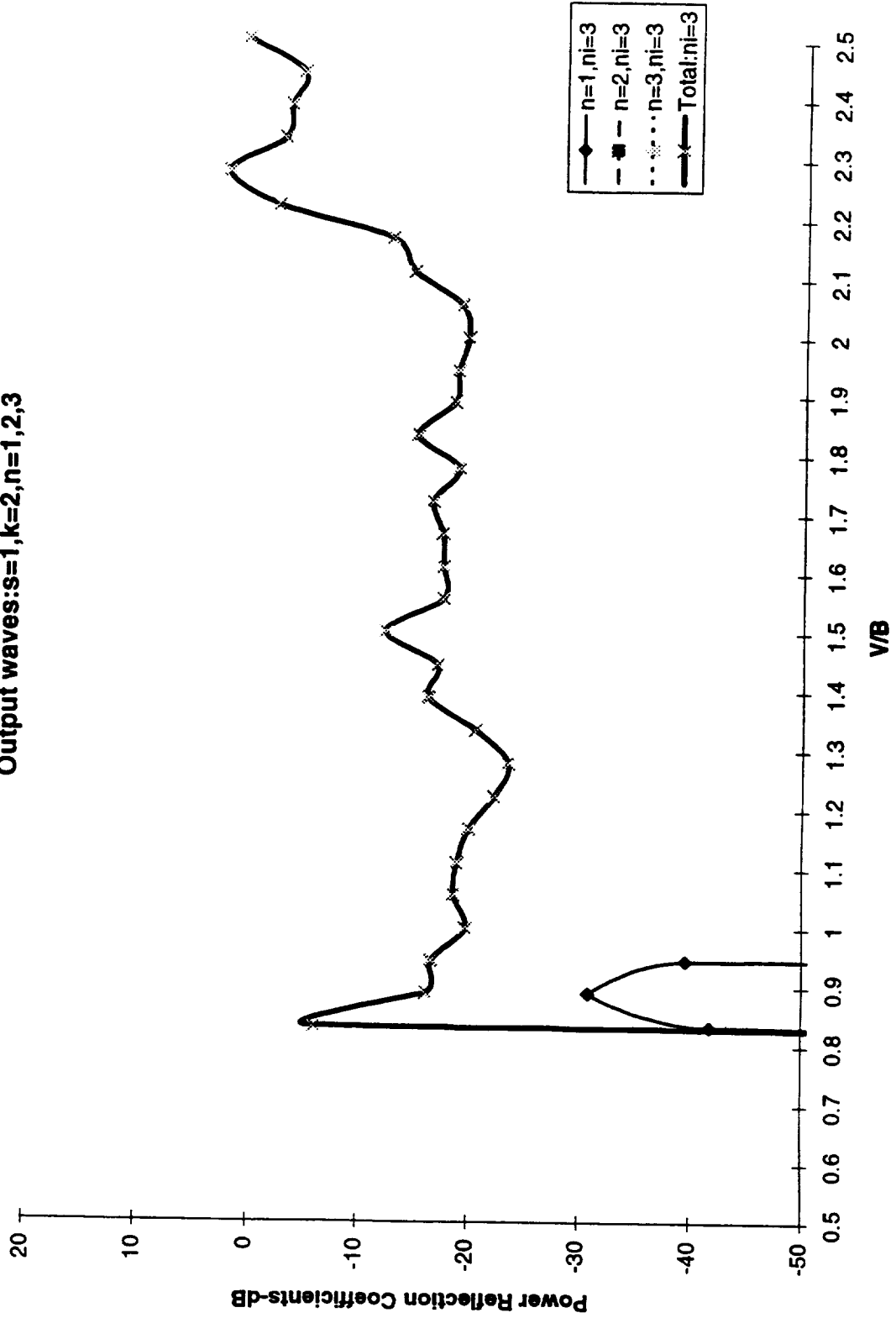
Output wave: $s=3, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

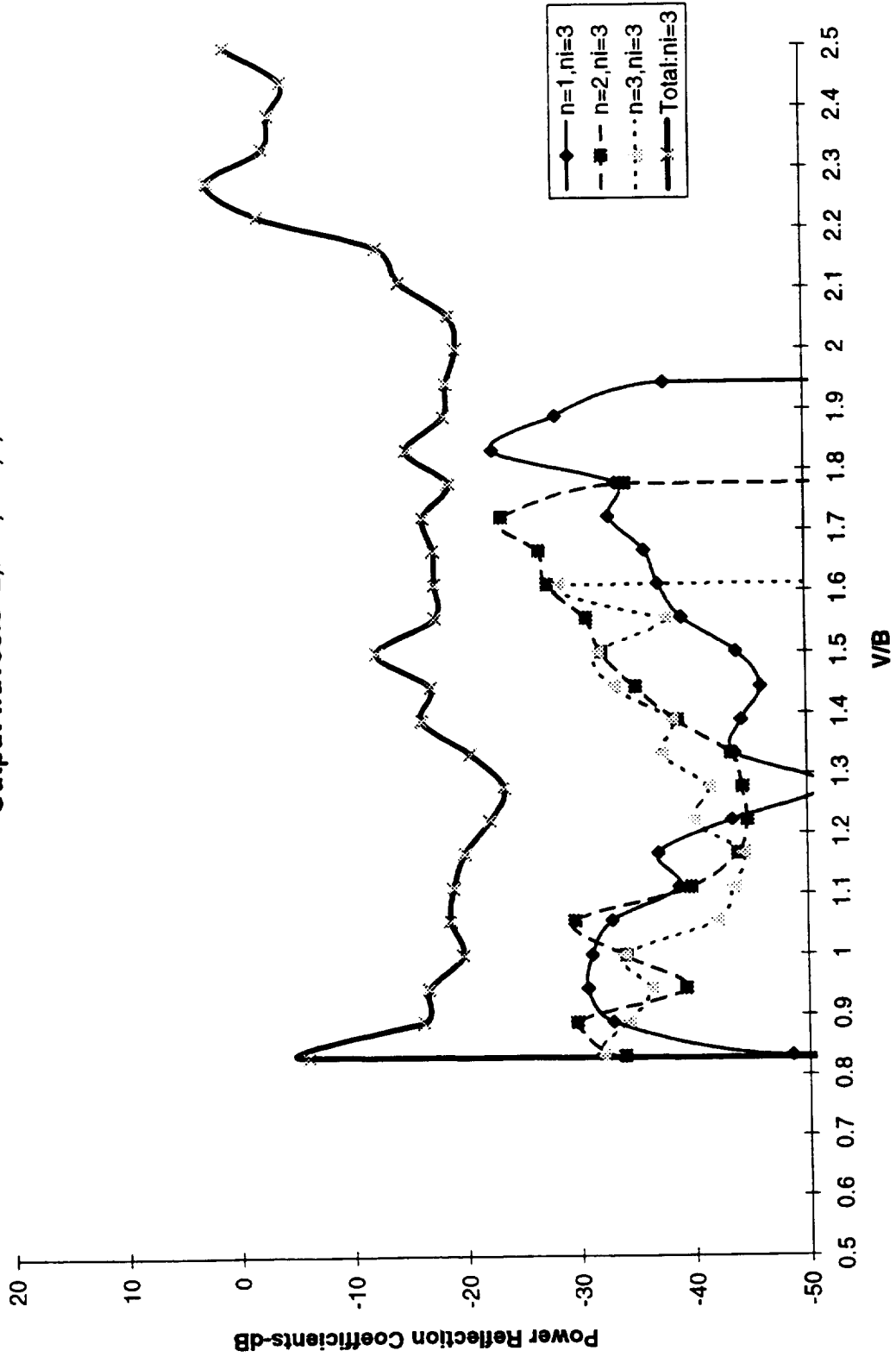
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

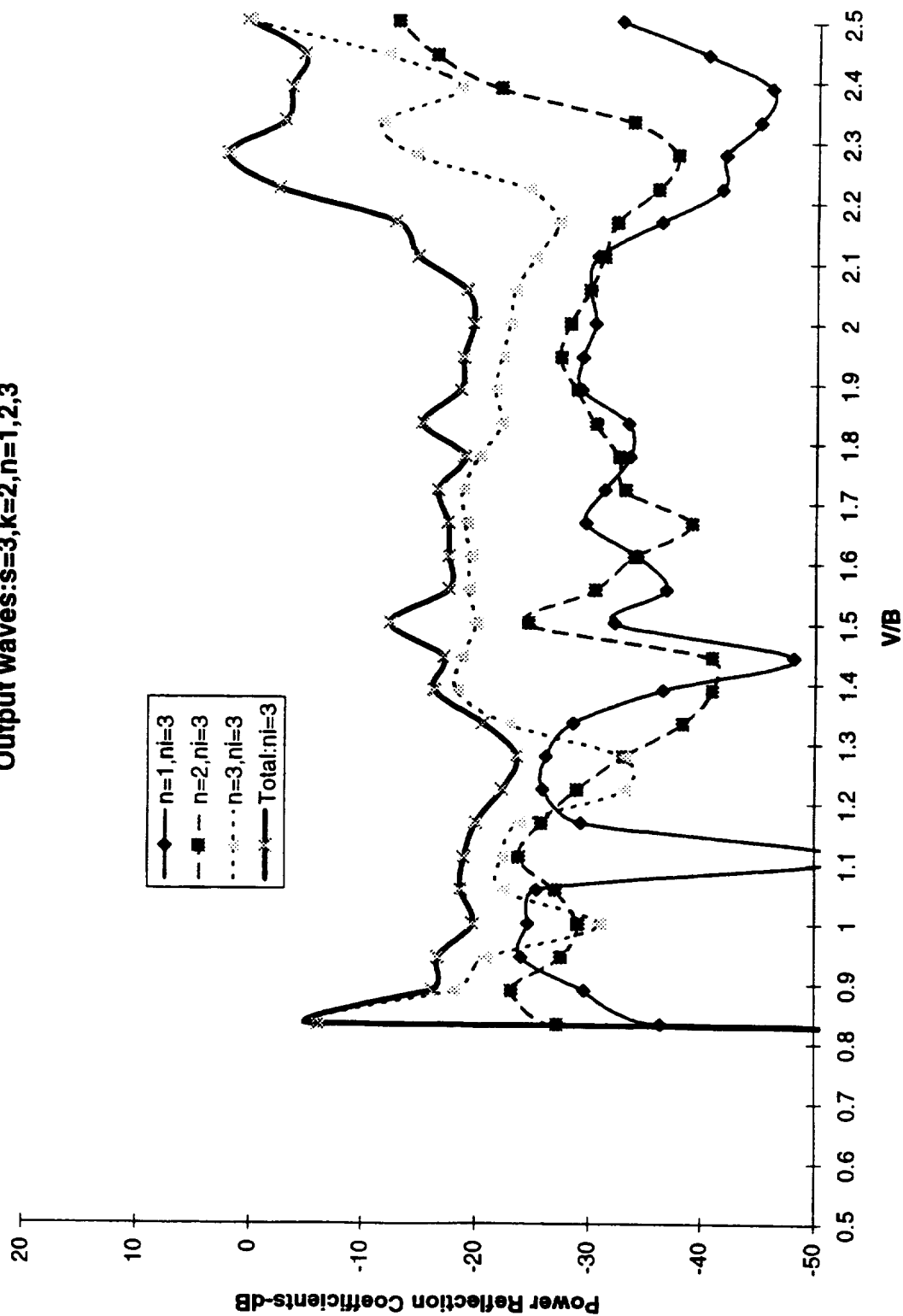
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

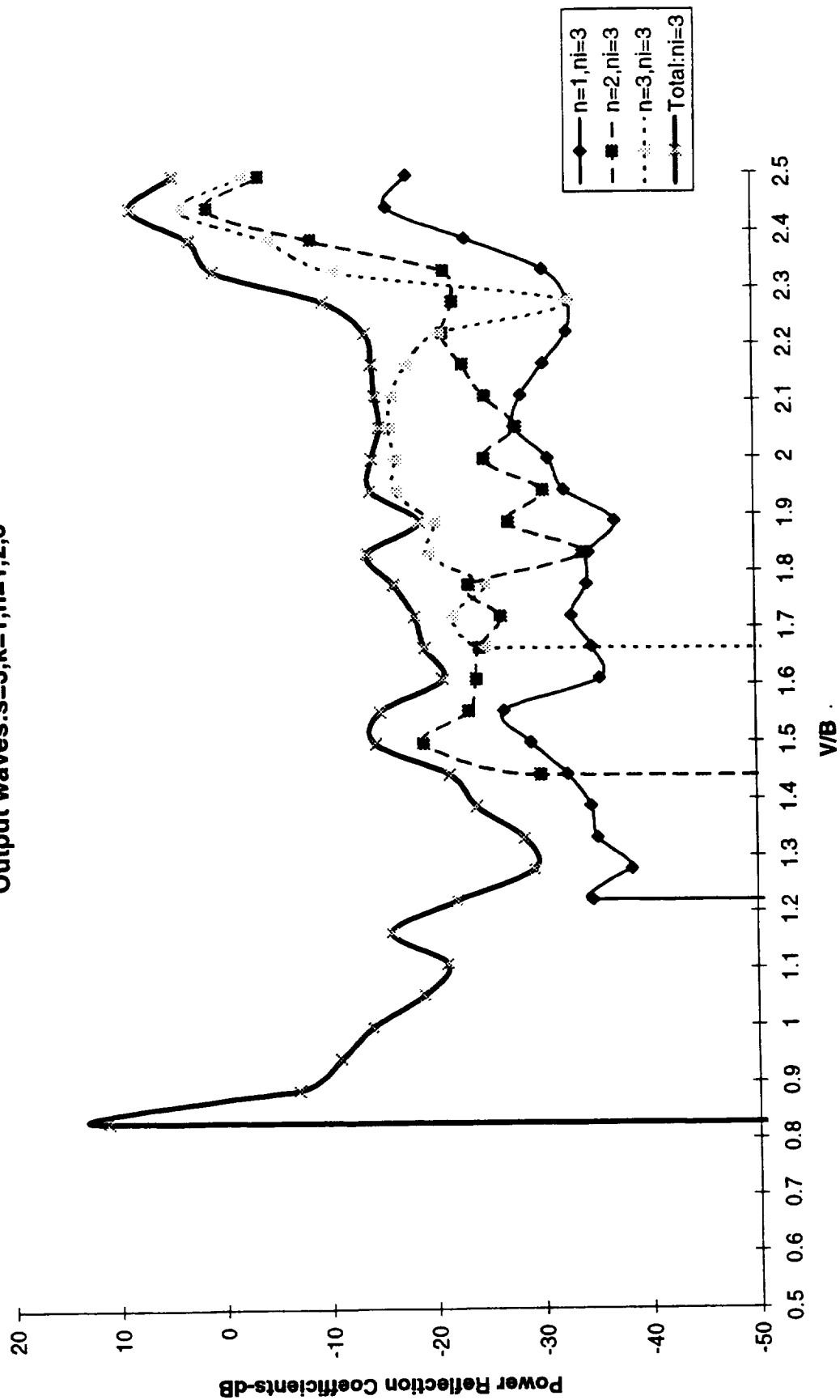
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

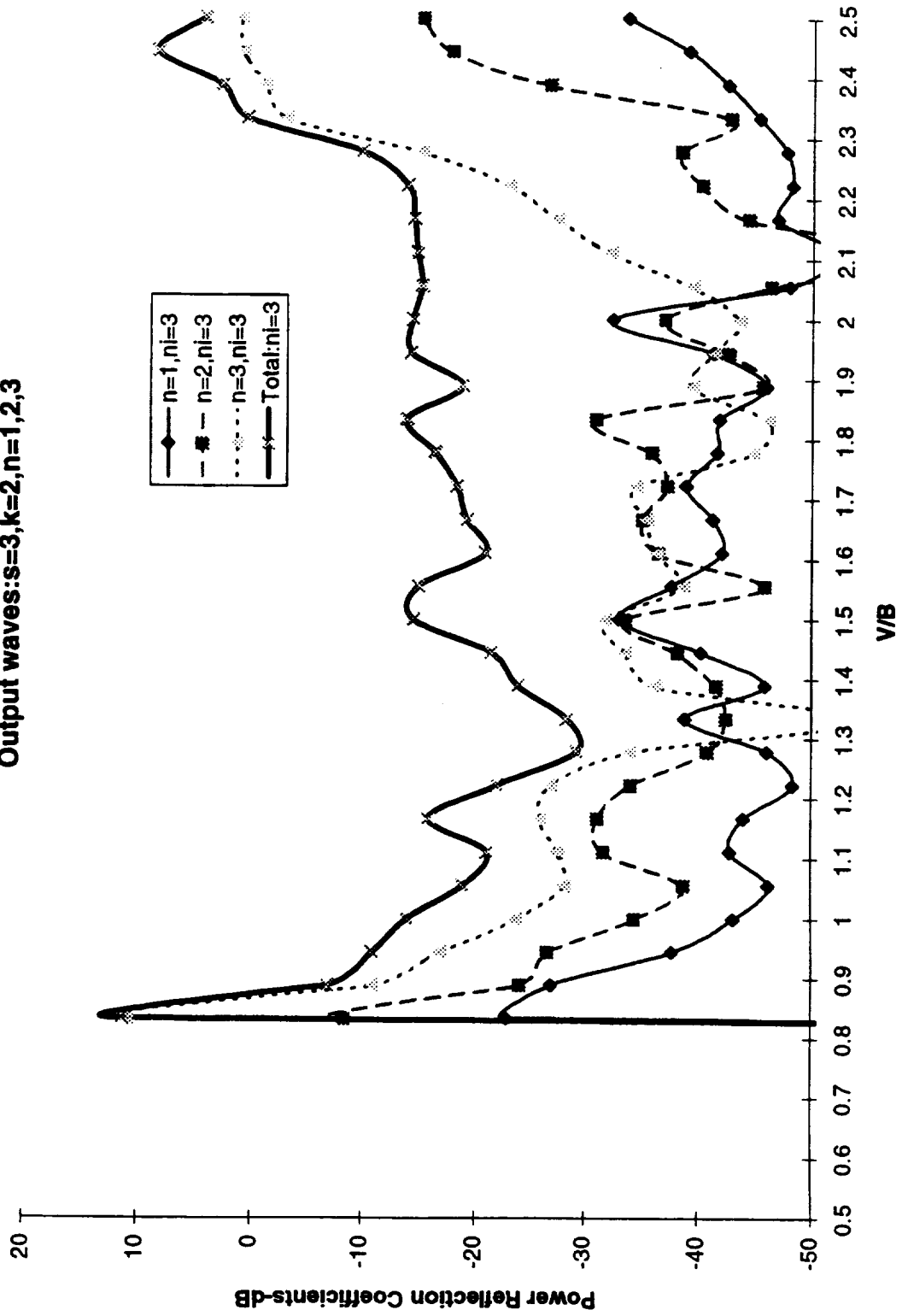
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

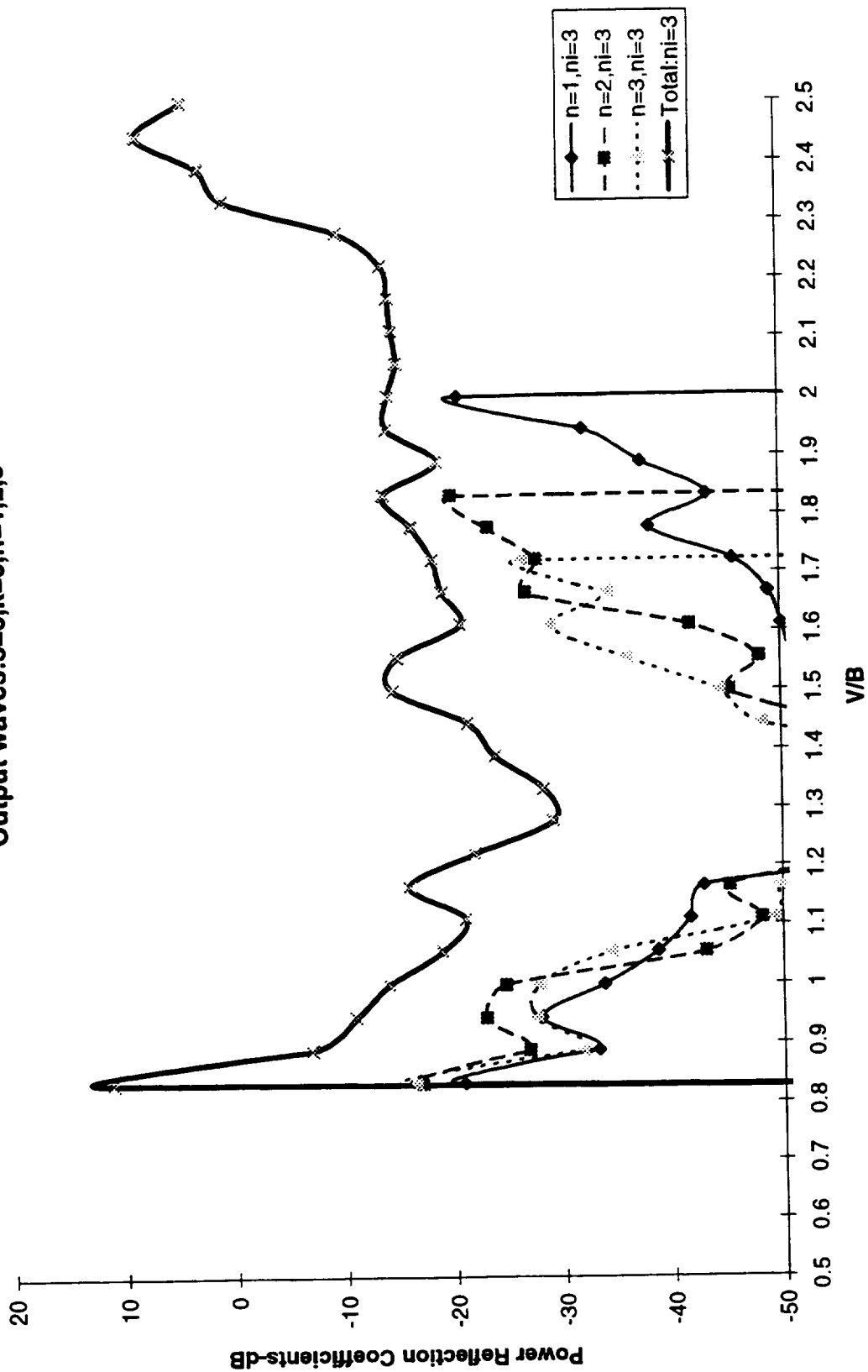
Output waves: $s=3, k=2, n=1, 2, 3$



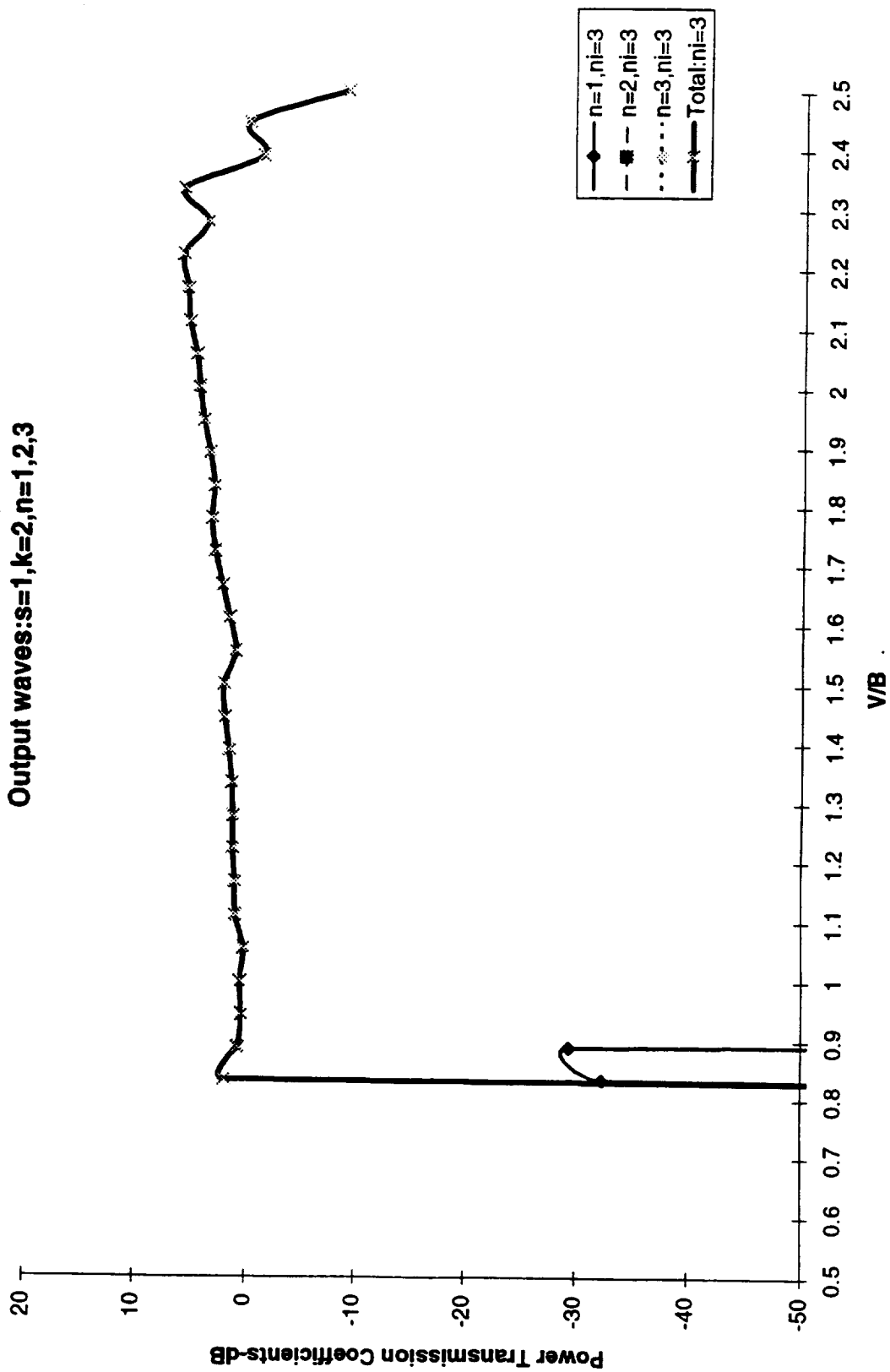
Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

Output waves: $s=3, k=3, n=1, 2, 3$



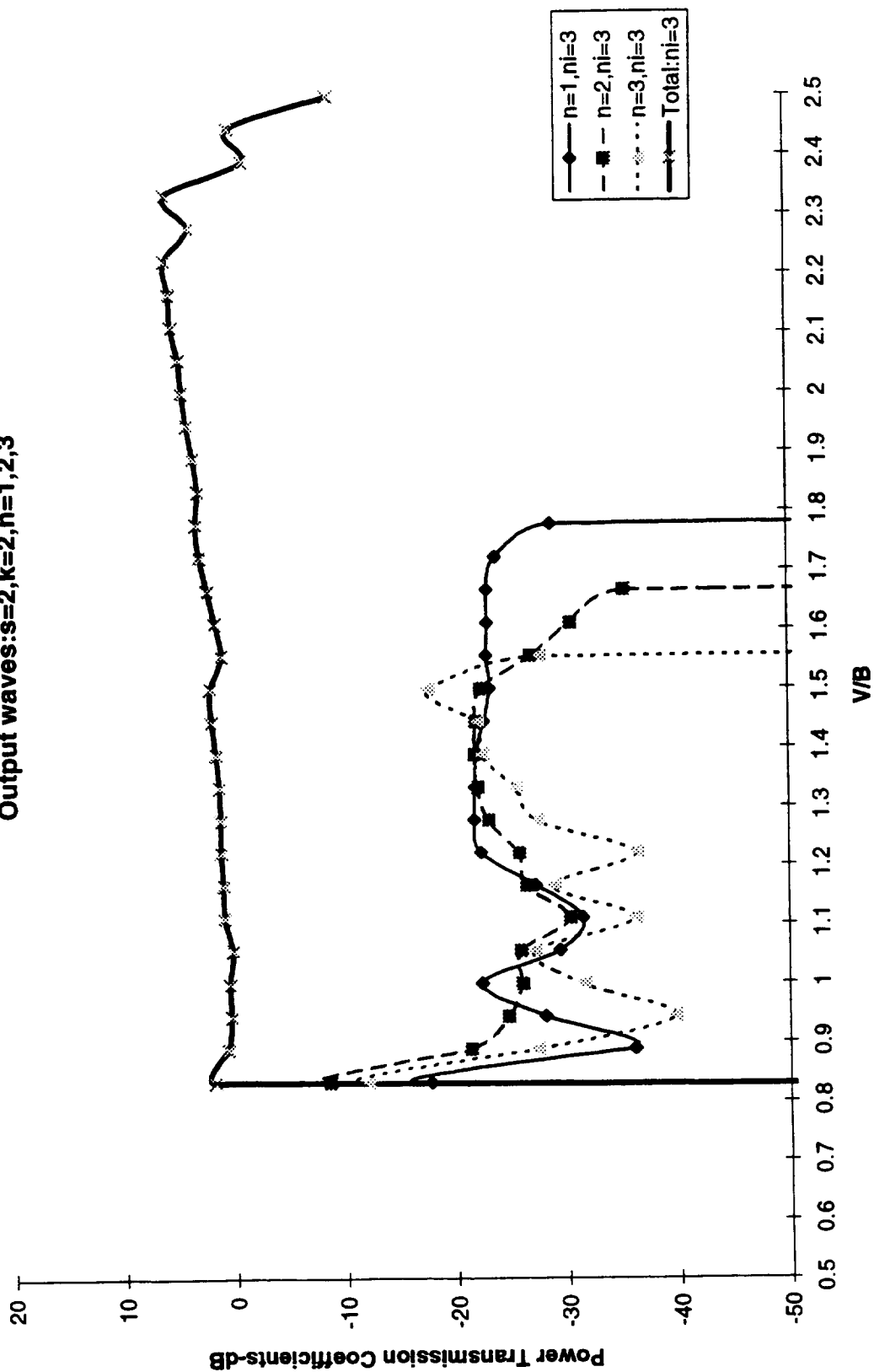
Rotor Transmission-High Speed Case
Input wave: $s_i=3, k_i=2, n_i=3$
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_l=3, k_l=2, n_l=3$

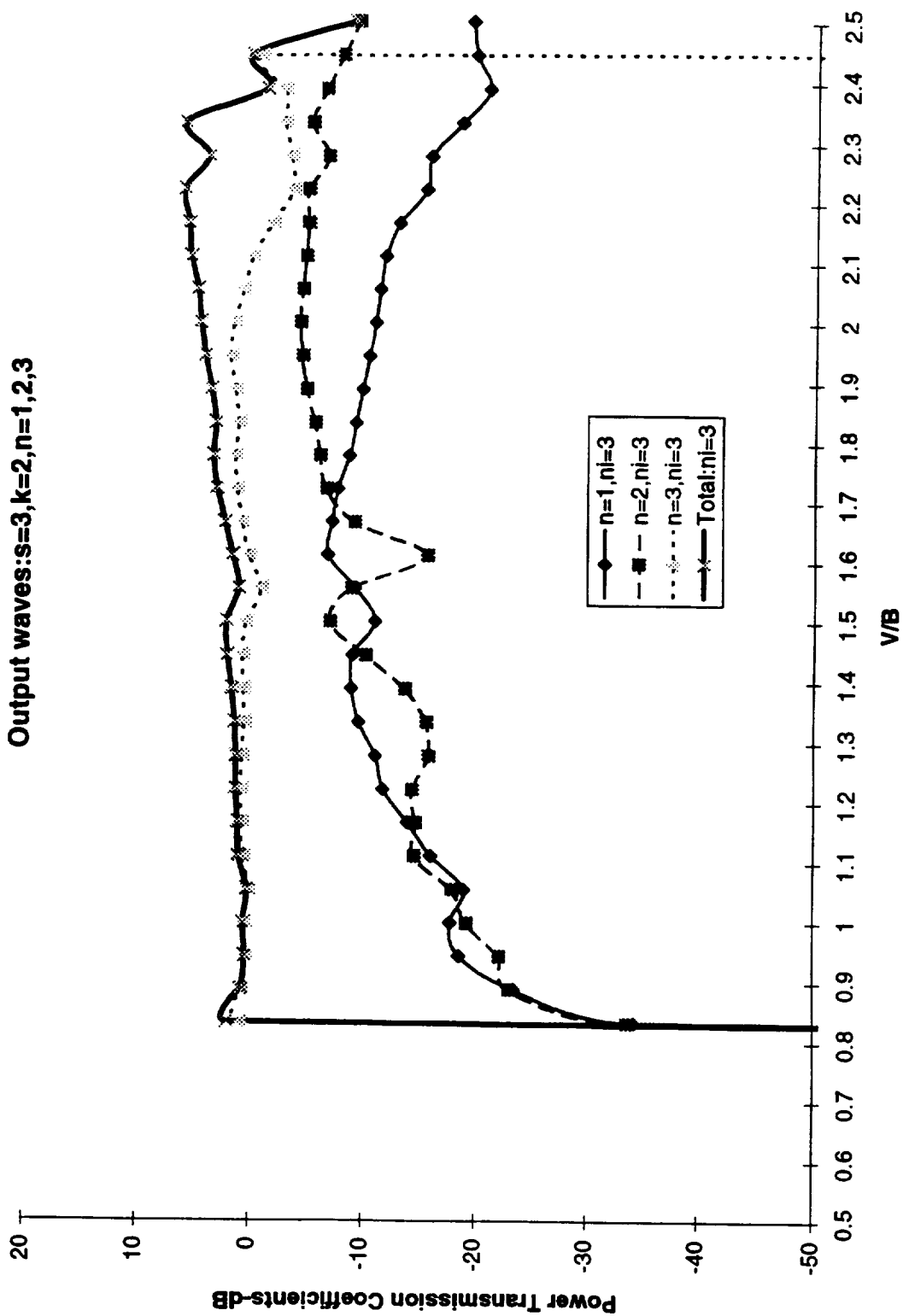
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_l=3, k_l=2, n_l=3$

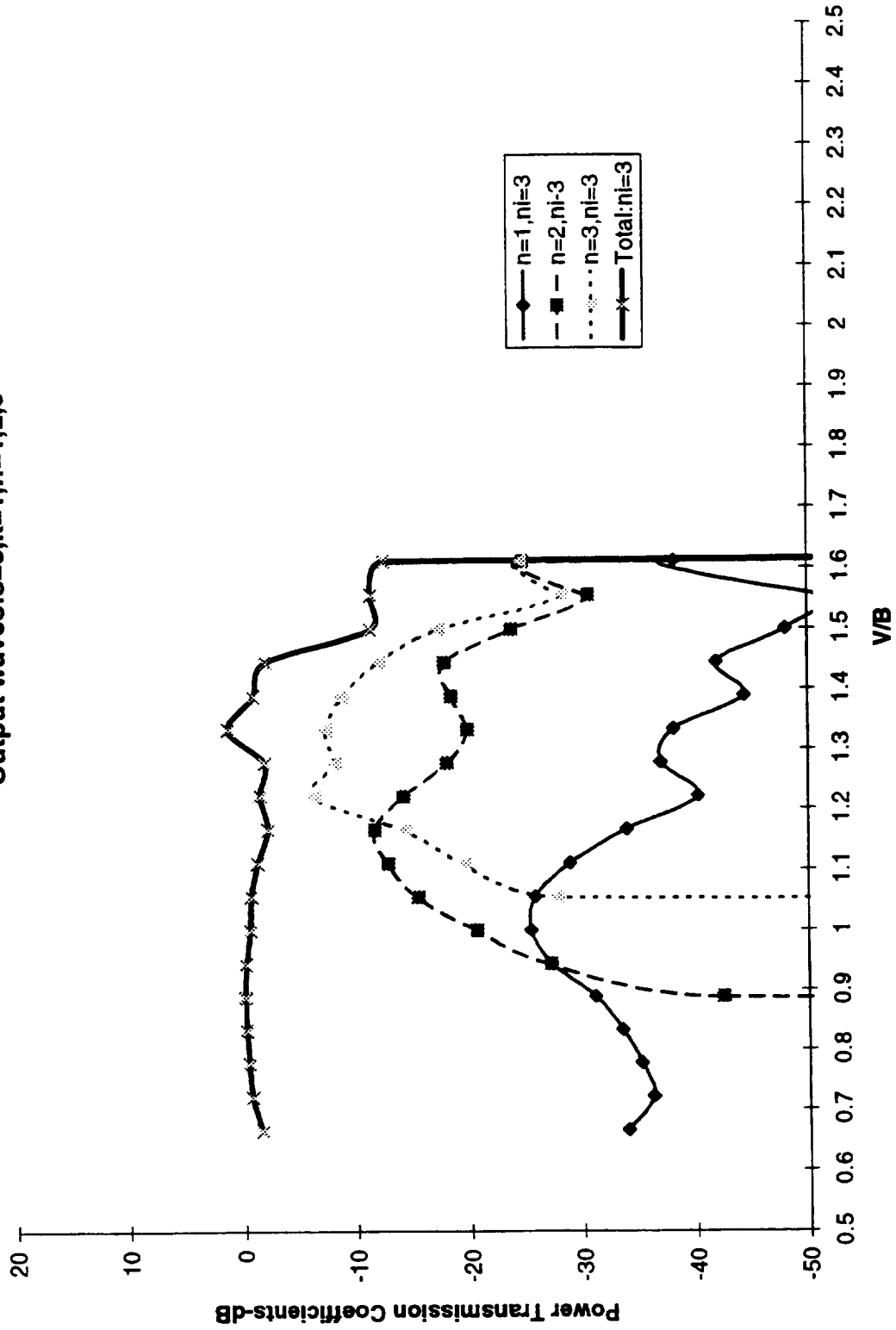
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

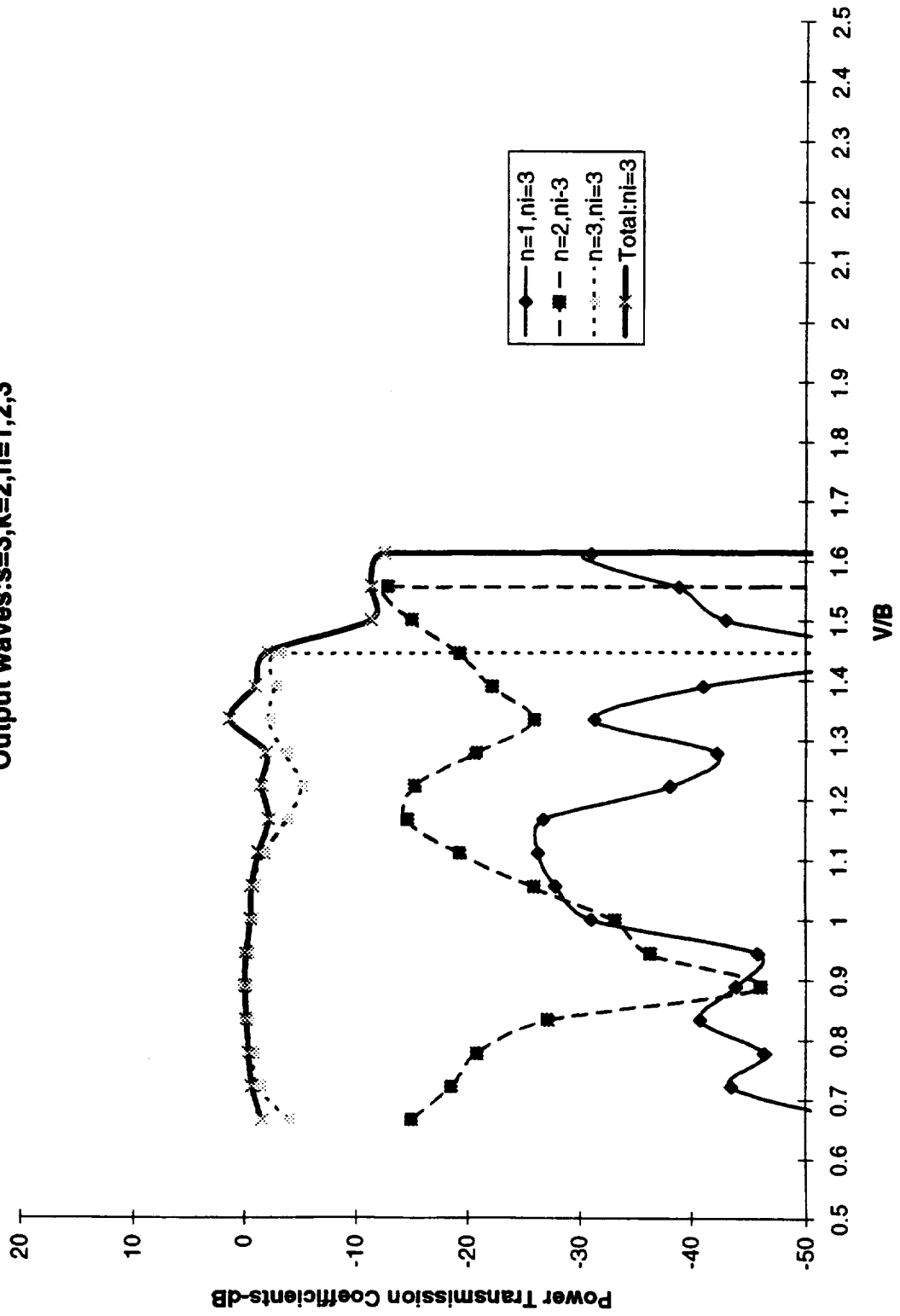
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_l=3, k_l=2, n_l=3$

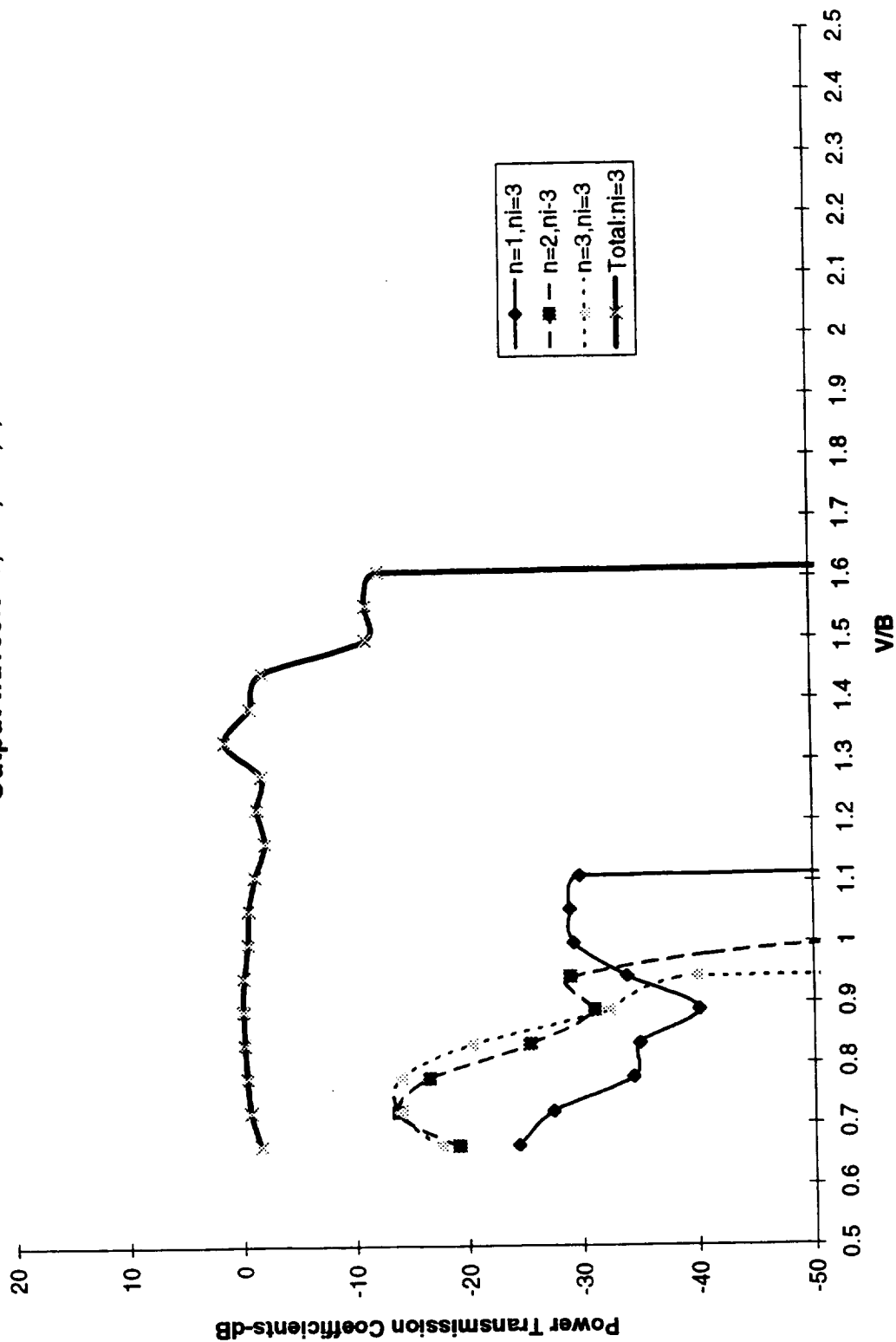
Output waves: $s=3, k=2, n=1, 2, 3$



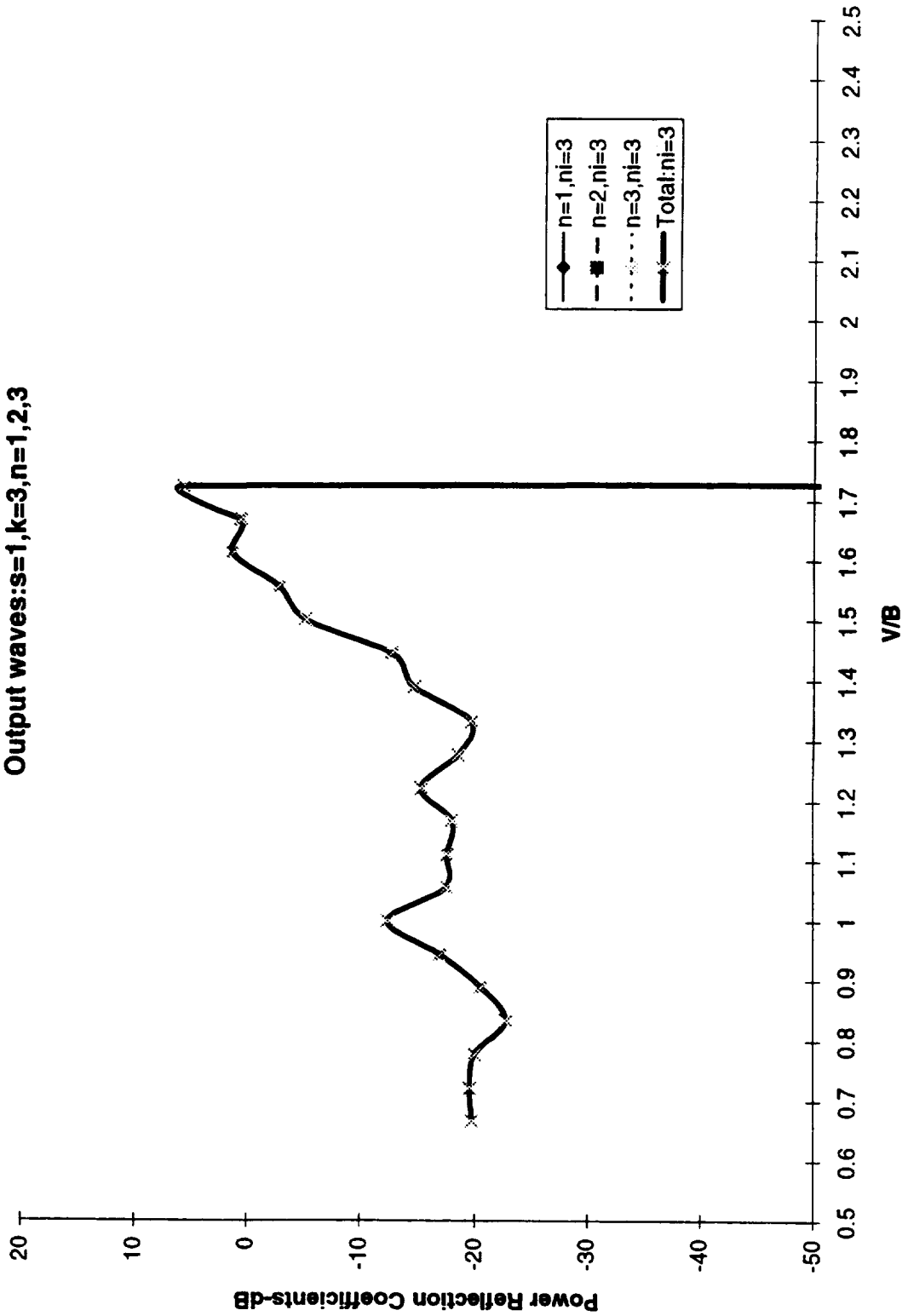
Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

Output waves: $s=3, k=3, n=1, 2, 3$



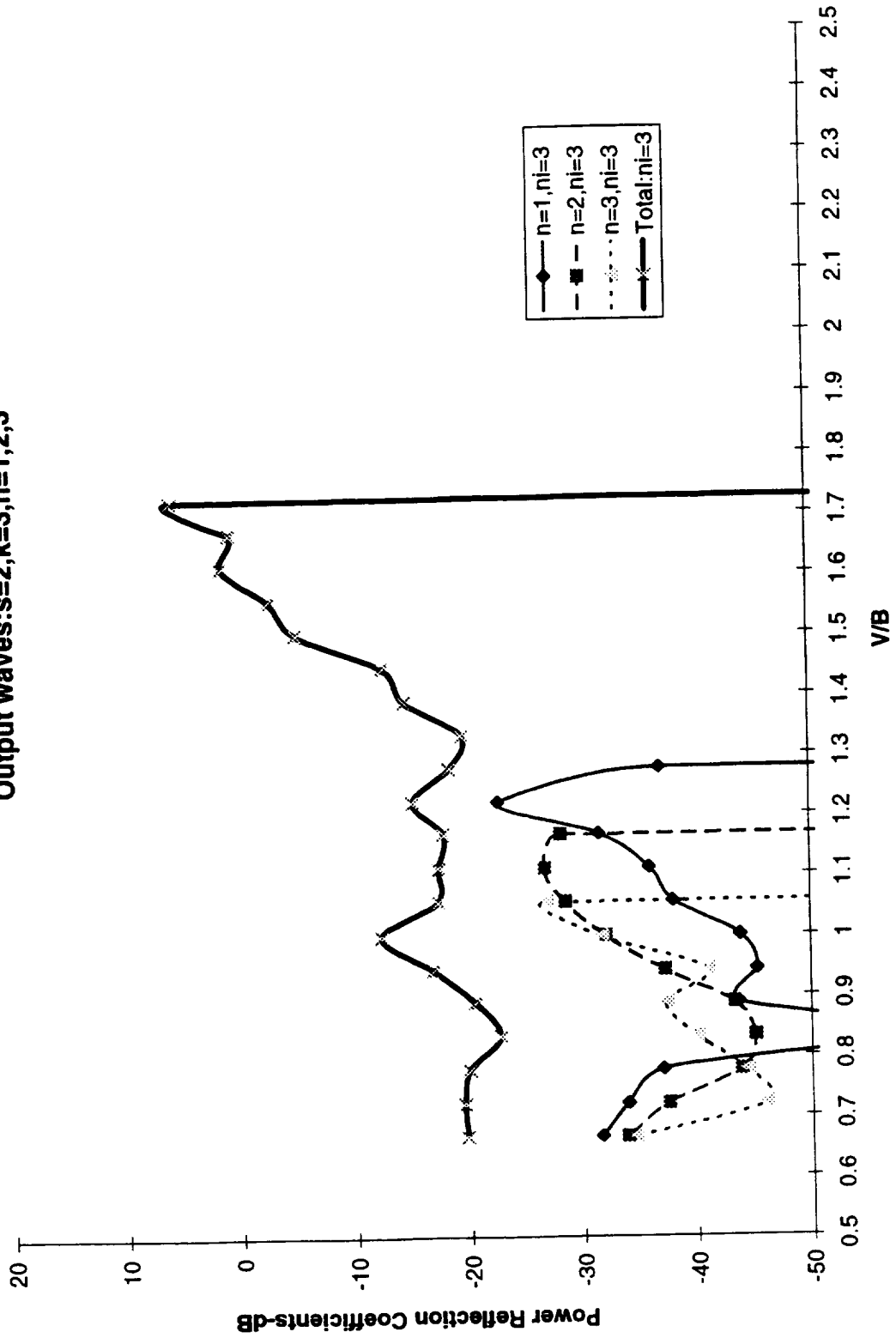
Rotor Reflection-High Speed Case
Input wave: $s_i=3, k_i=3, n_i=3$
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

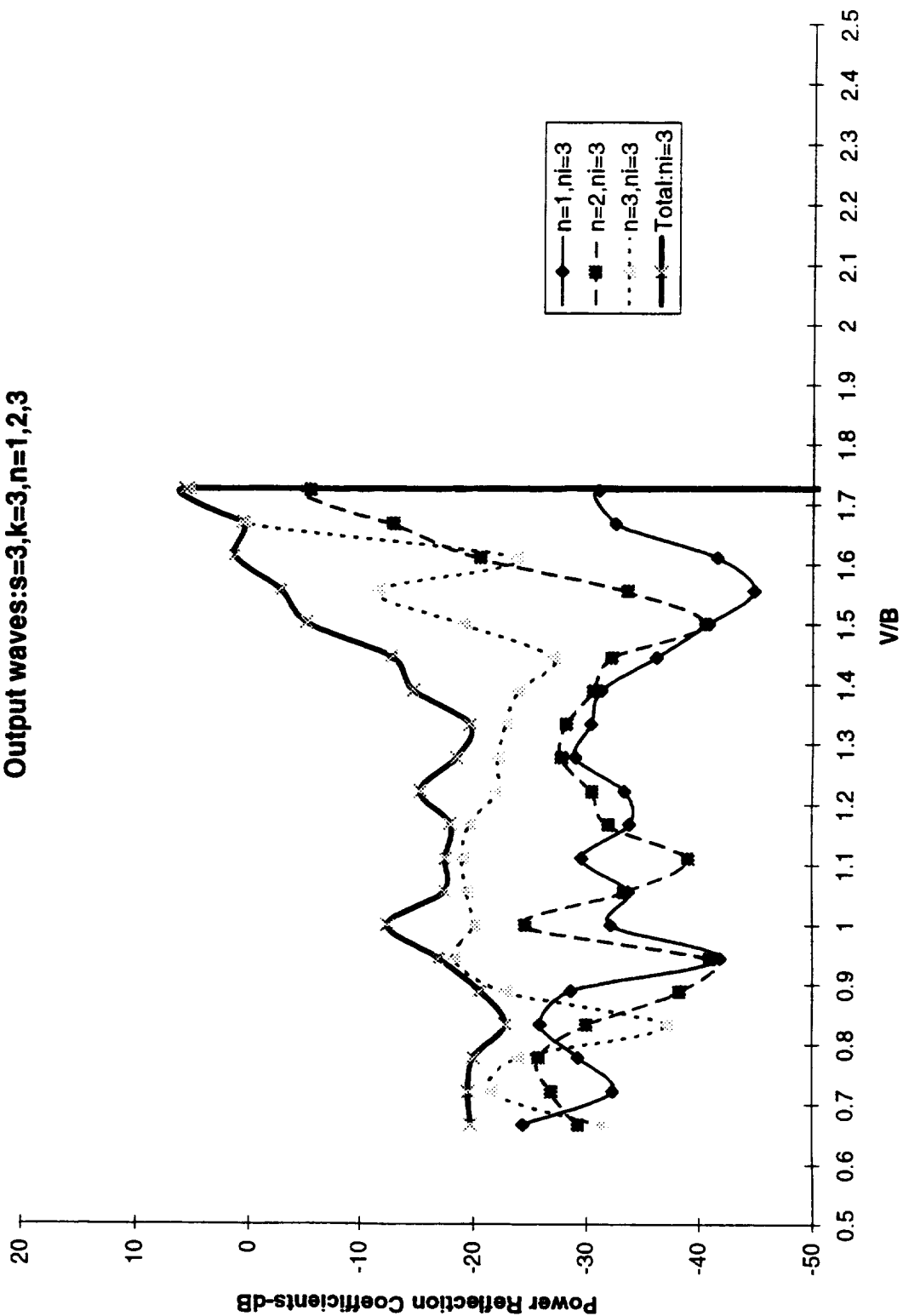
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

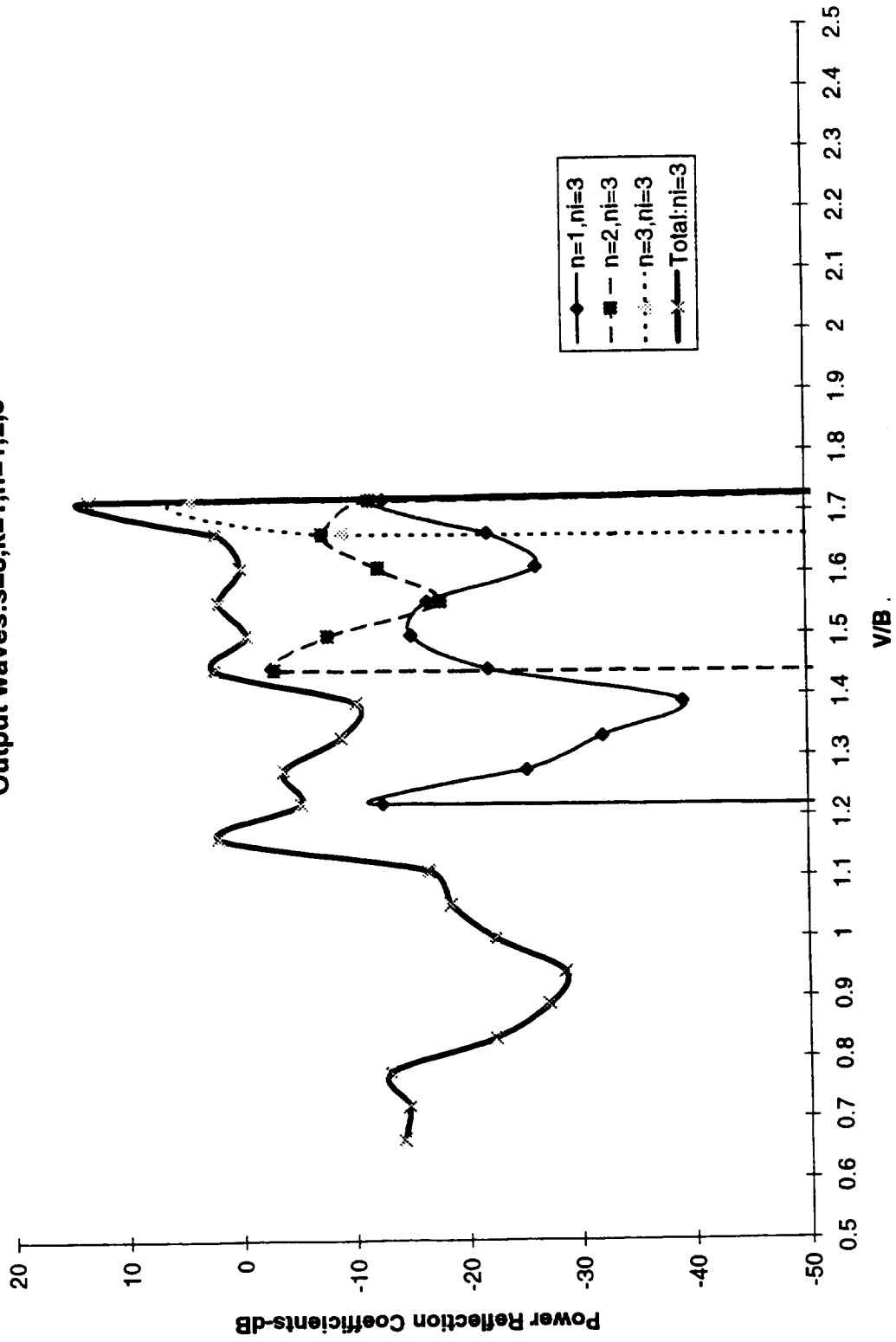
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

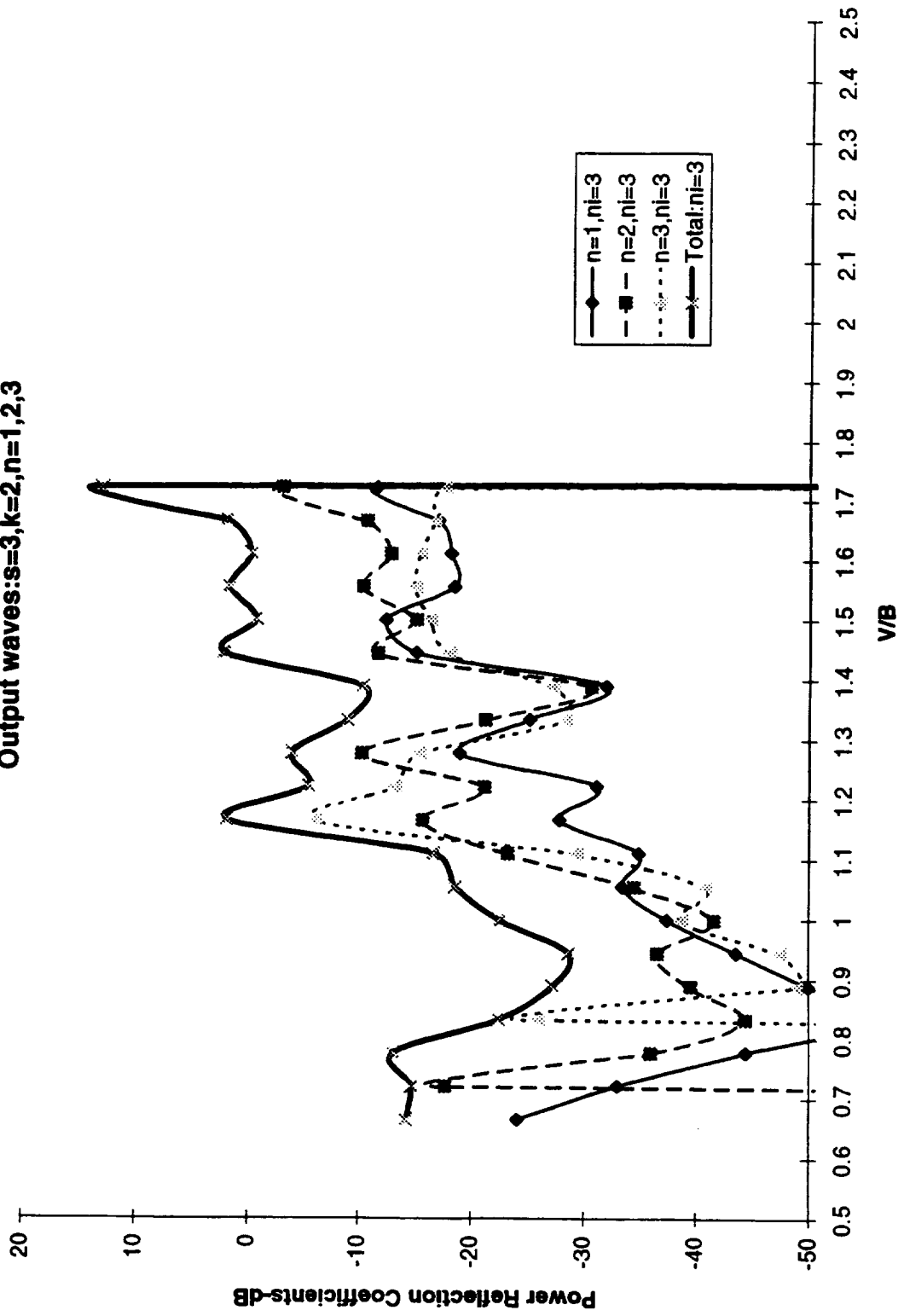
Output wave: $s=3, k=1, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

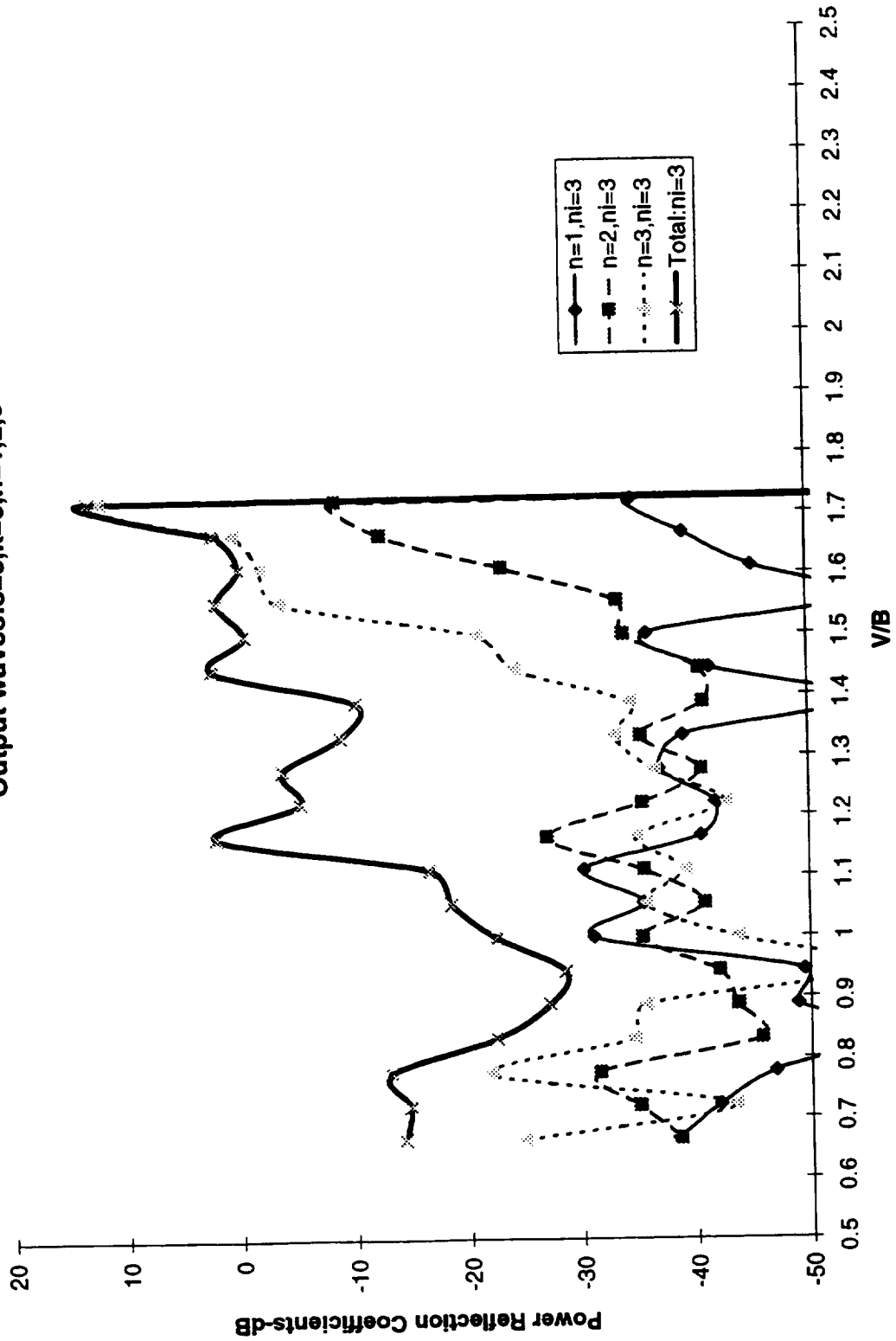
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

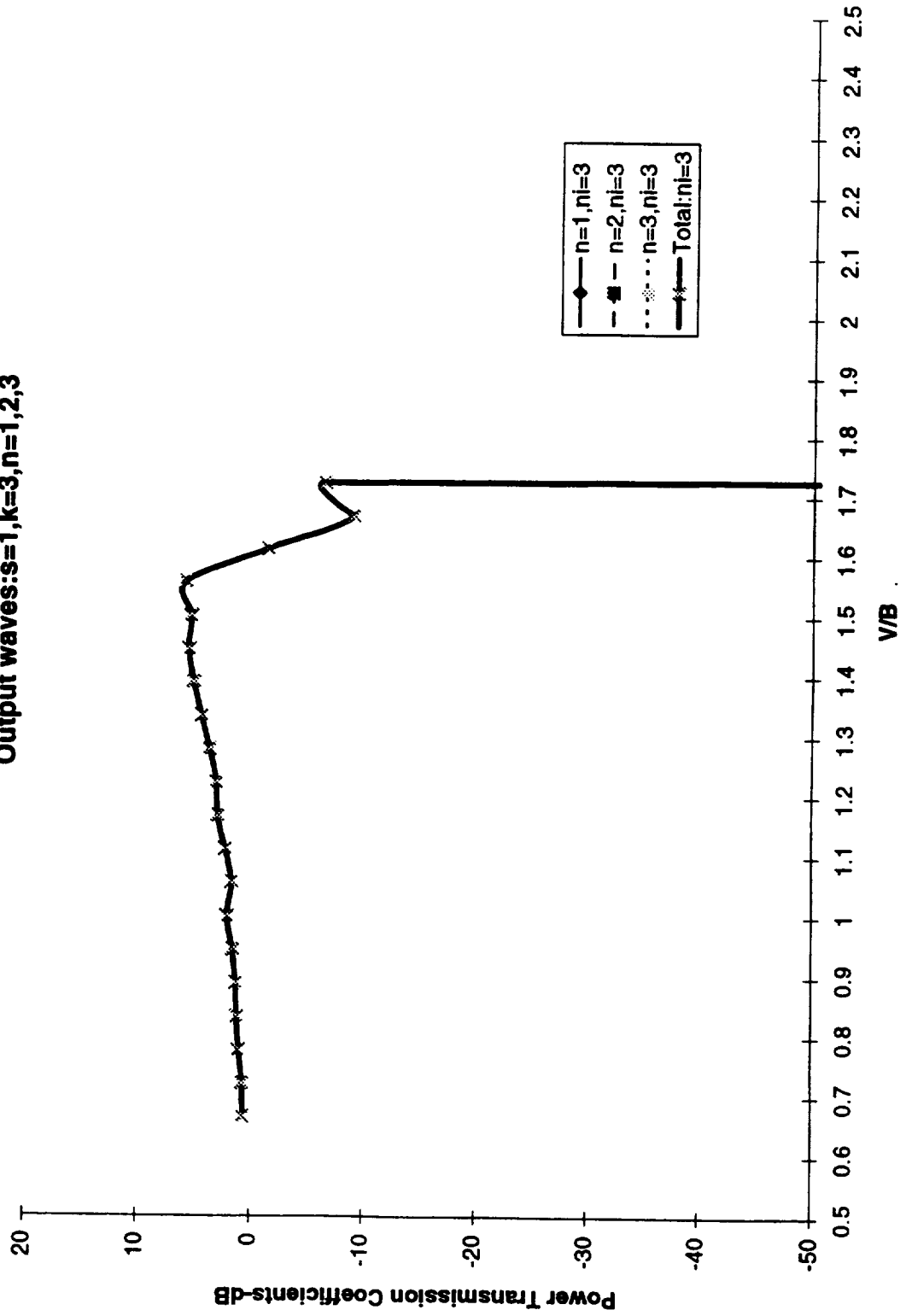
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

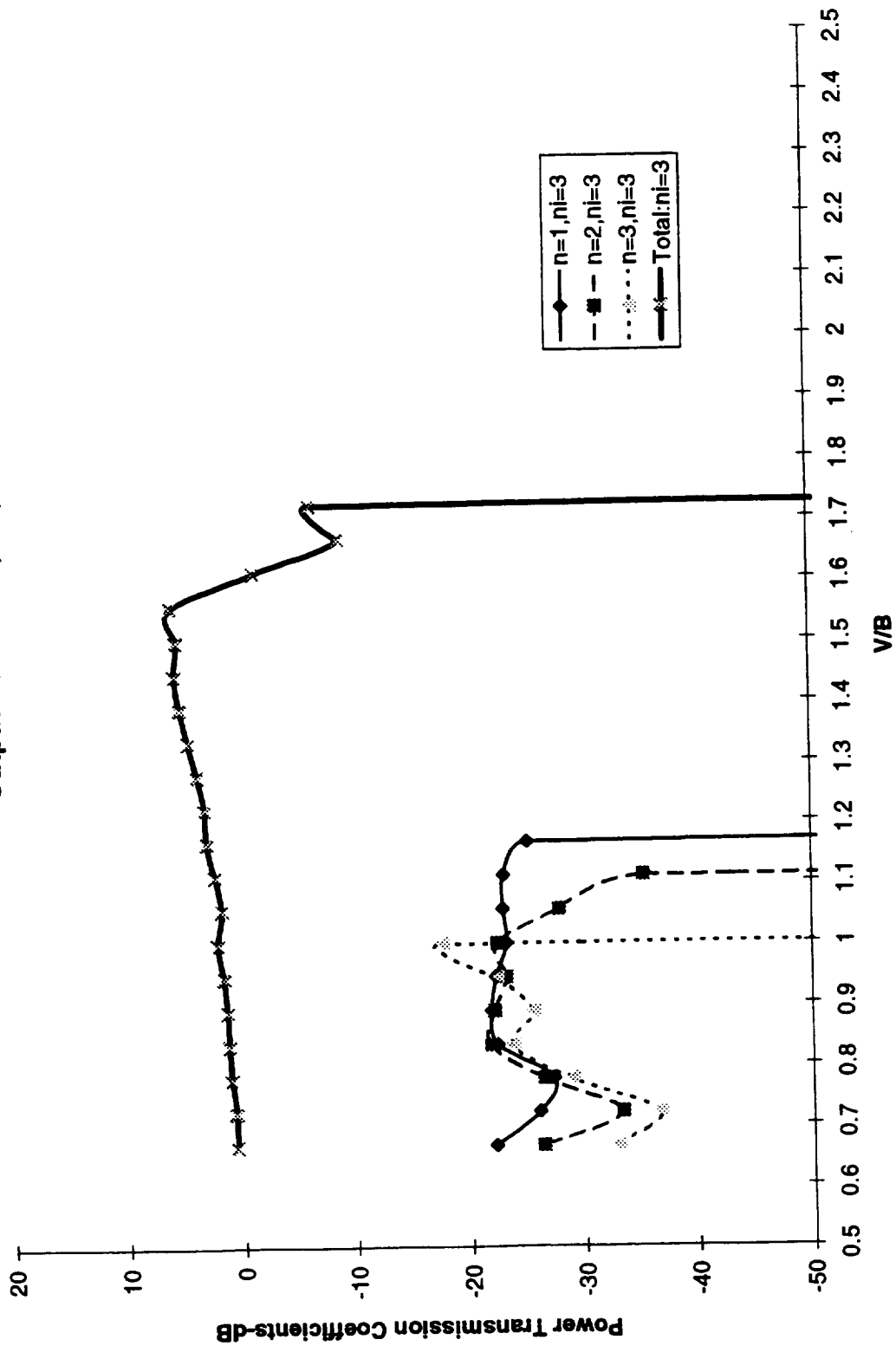
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

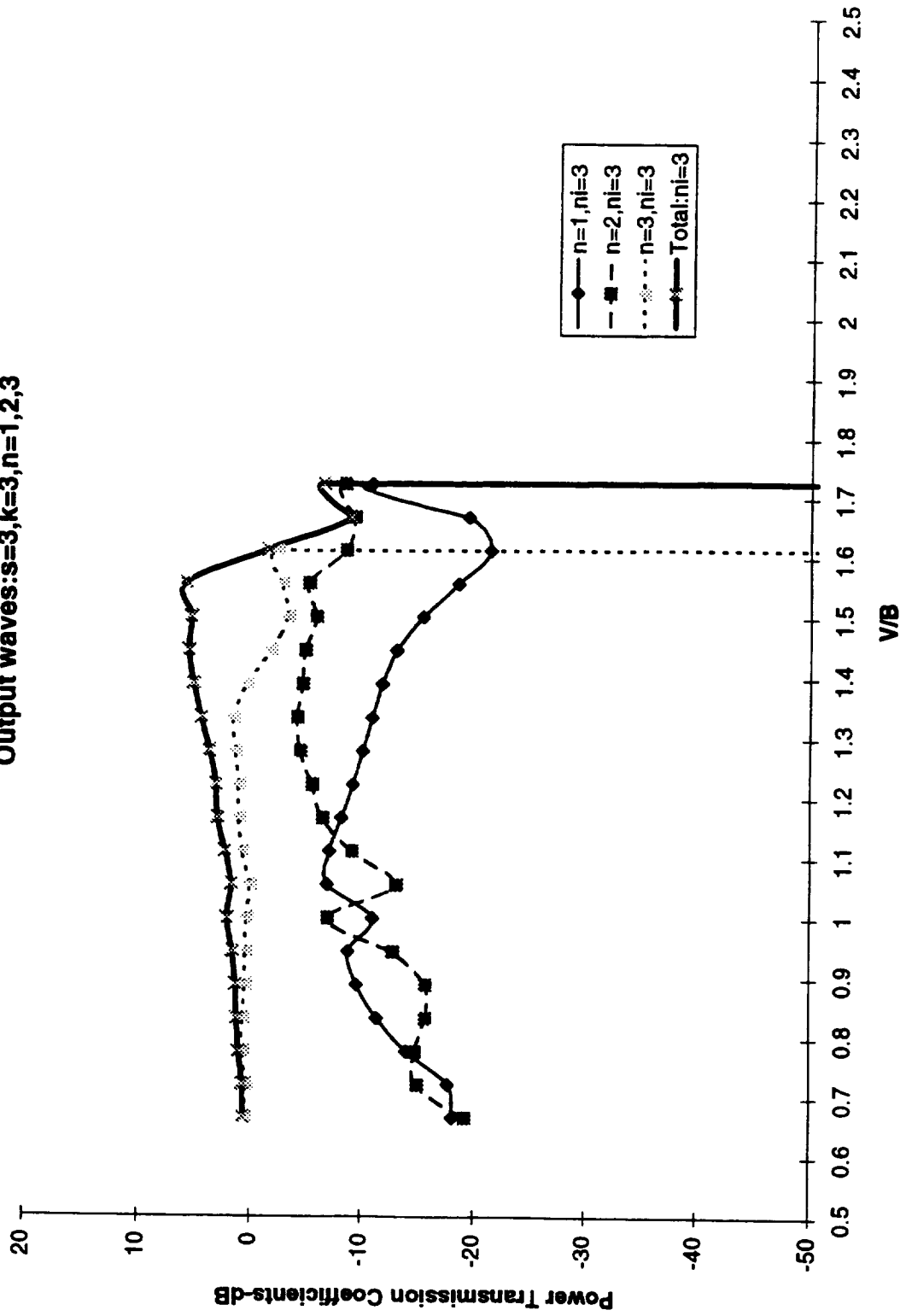
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

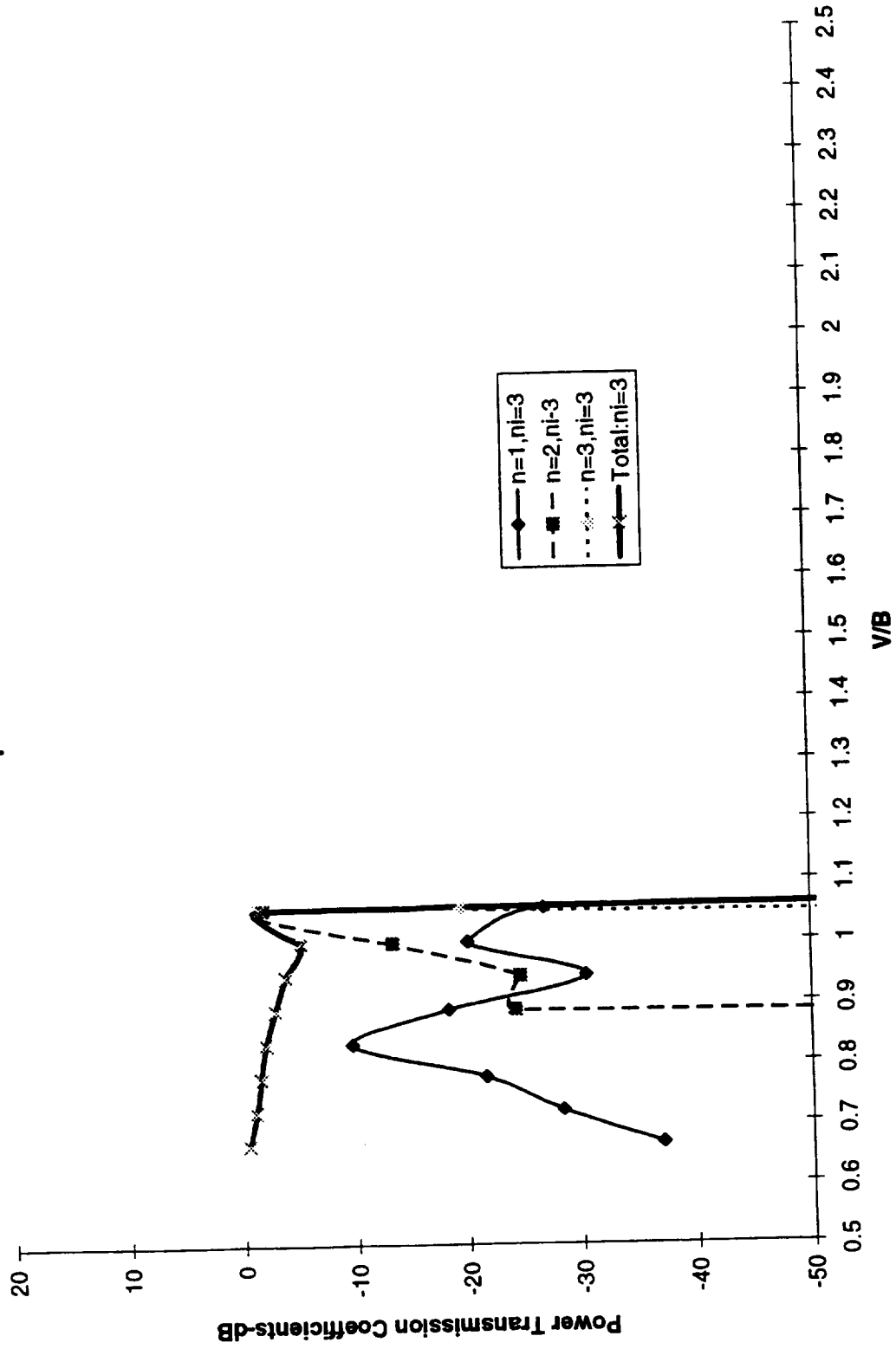
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $sl=3, kl=3, nl=3$

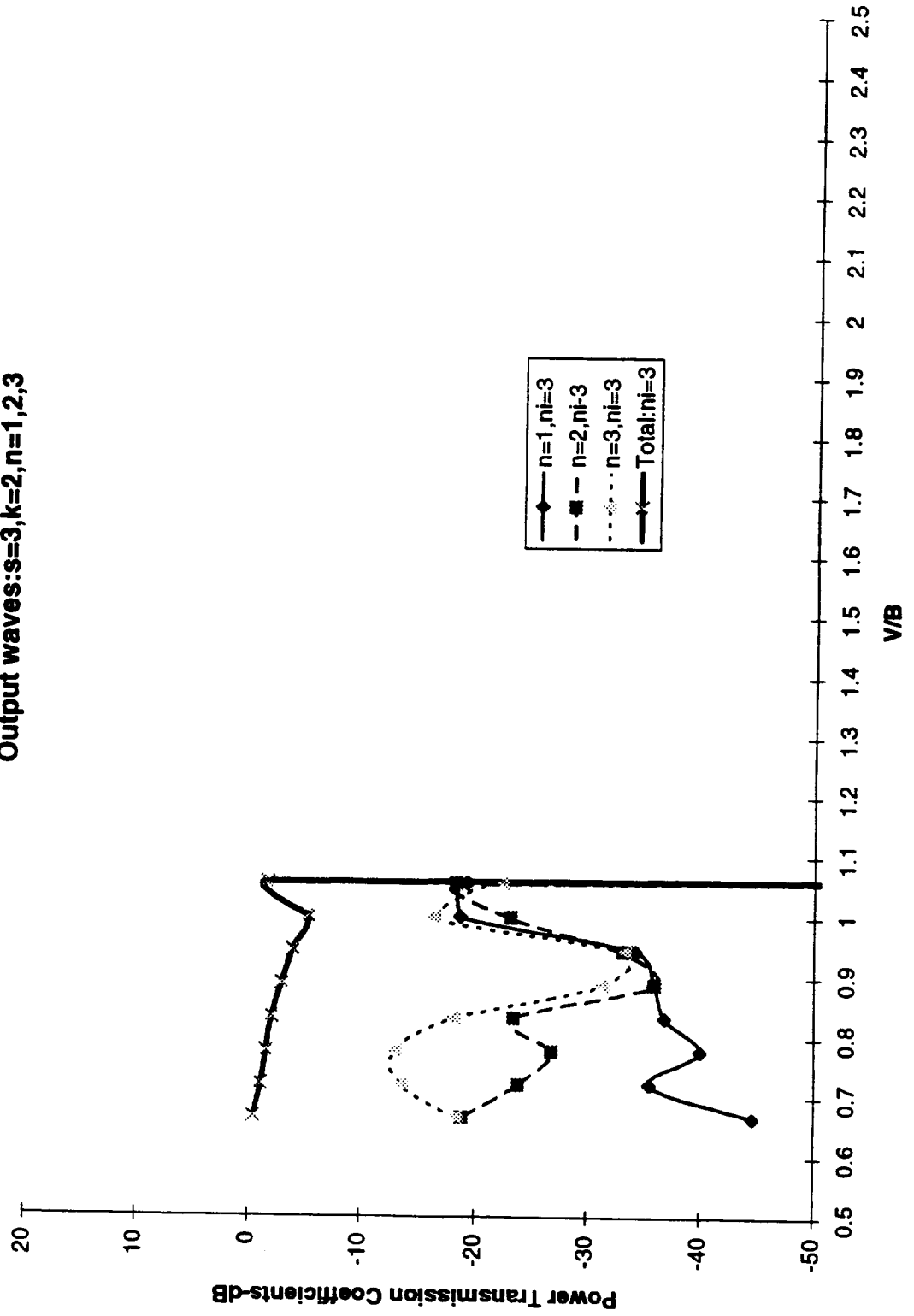
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

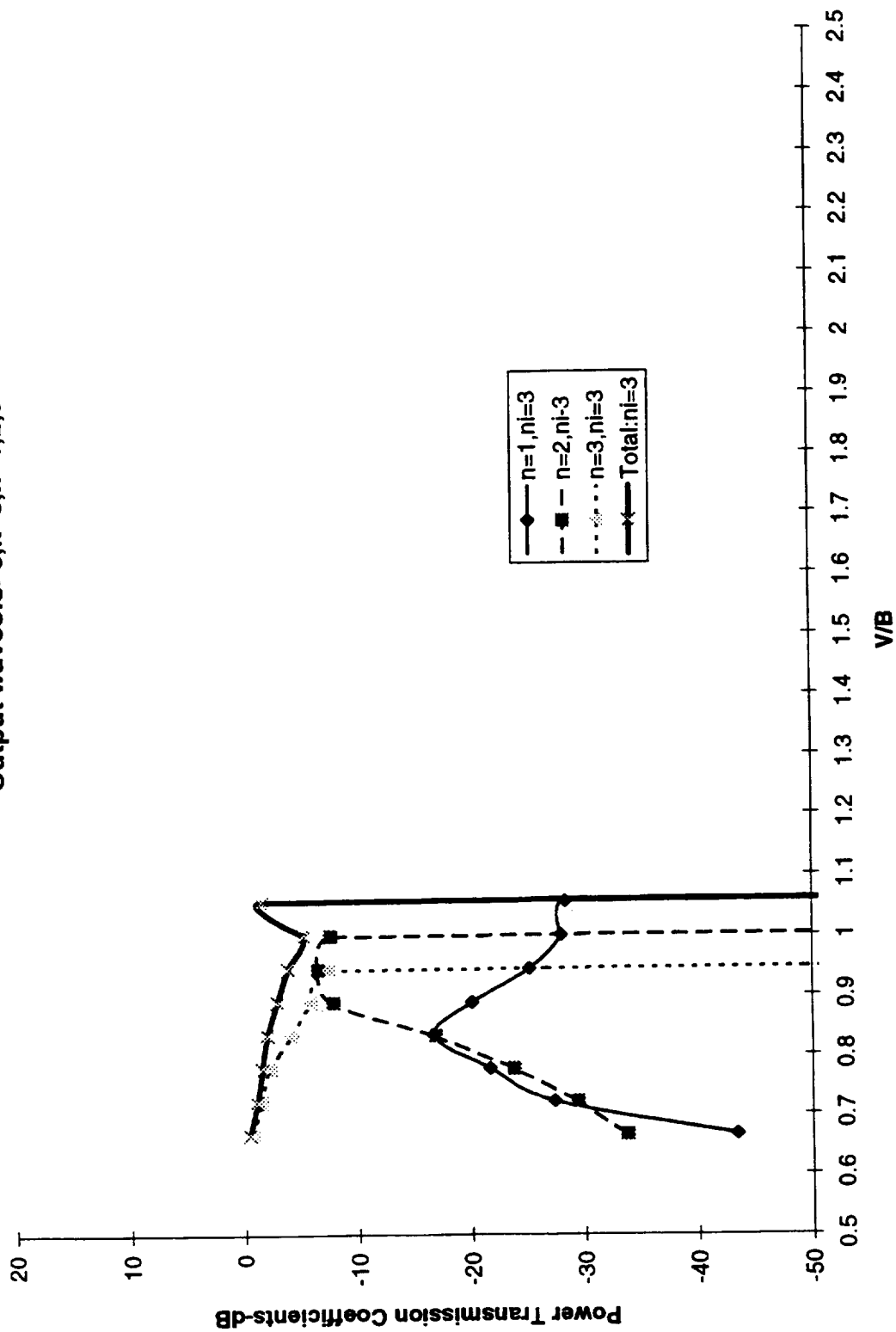
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-High Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

Output waves: $s=3, k=3, n=1, 2, 3$



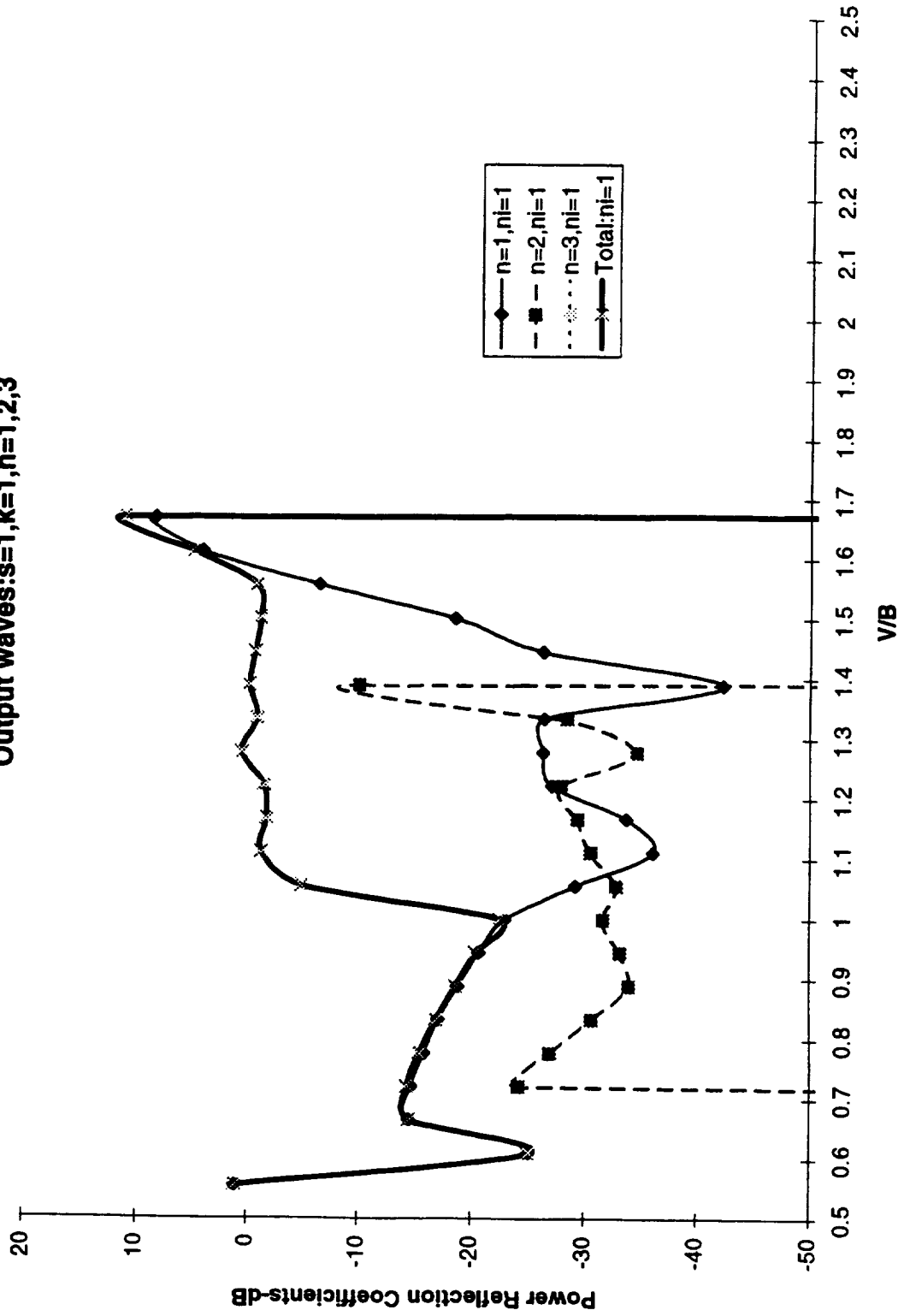
1.2 Scattering Plots for Mid Speed Case

Curves for the high speed case are presented in this section. They are discussed in Chapter 3 of Volume 1 of this report (Ref. 1).

Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

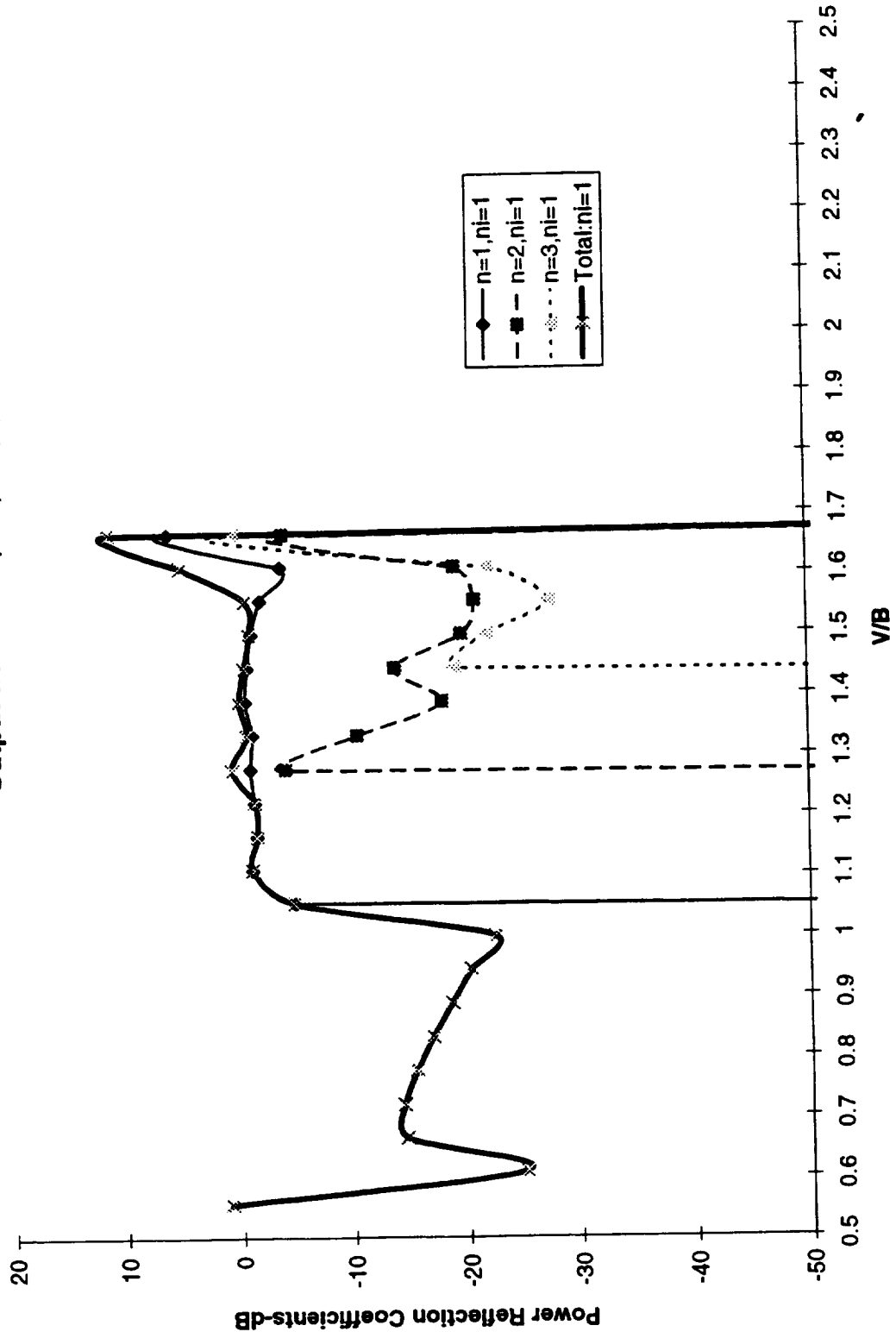
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

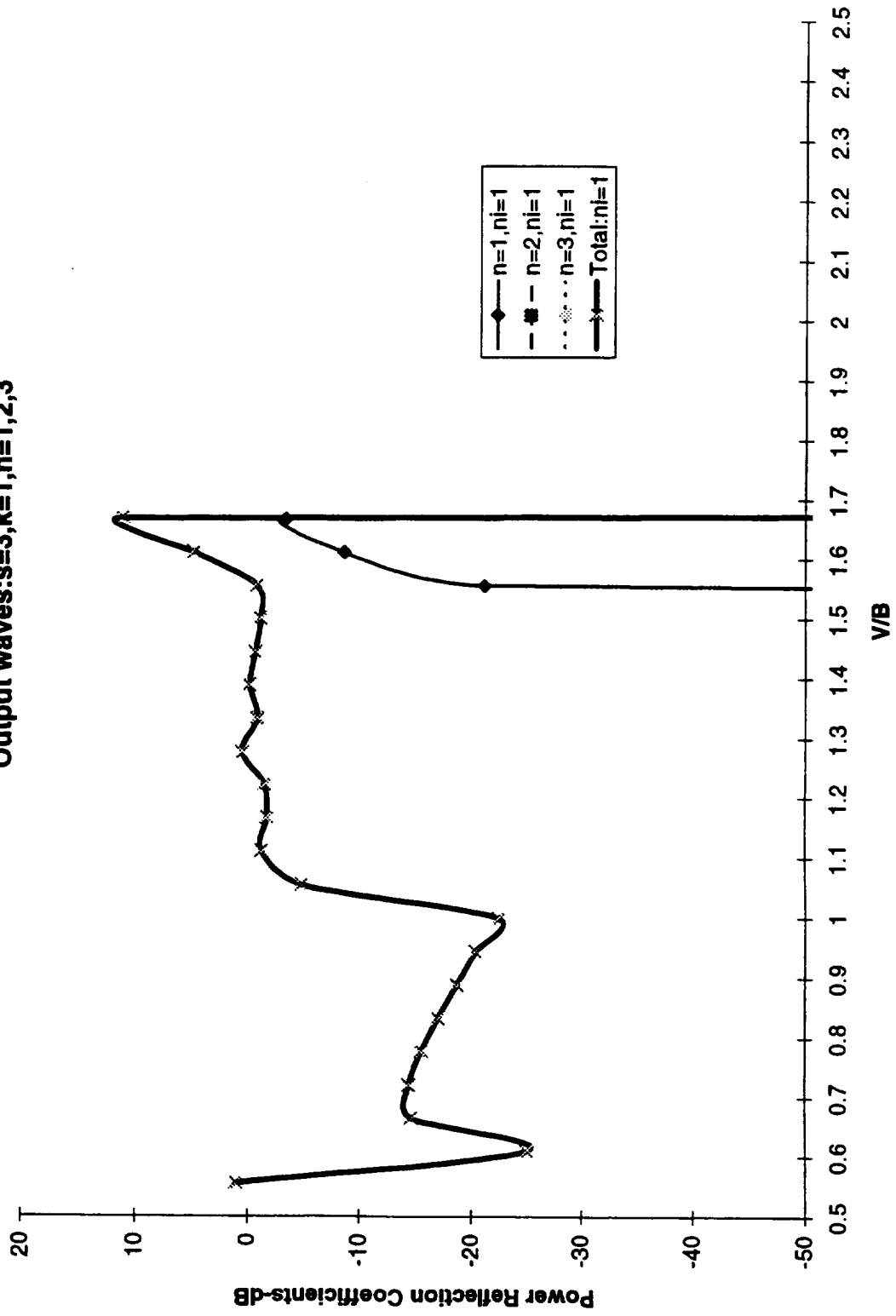
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

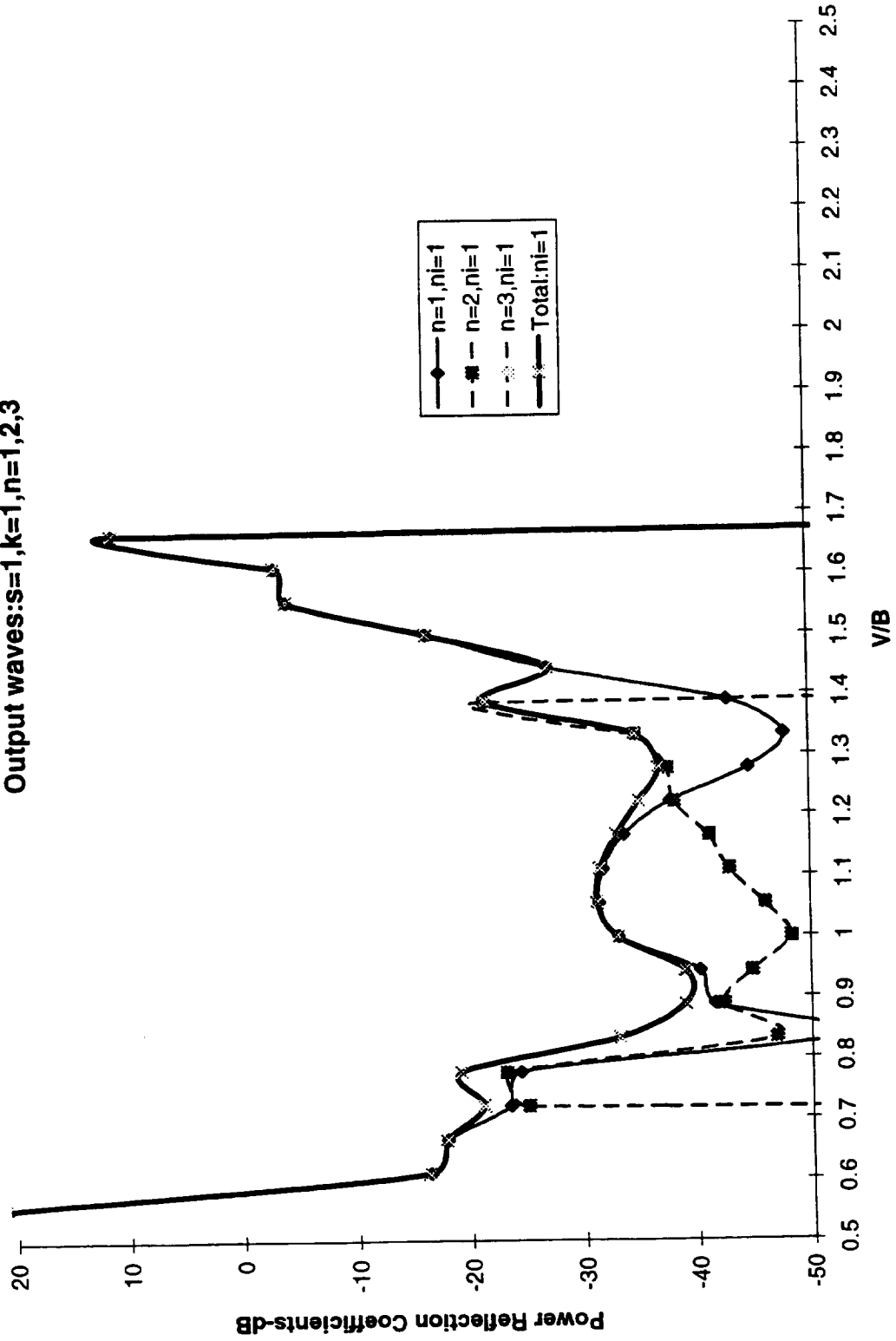
Output waves: $s=3, k=1, n=1, 2, 3$



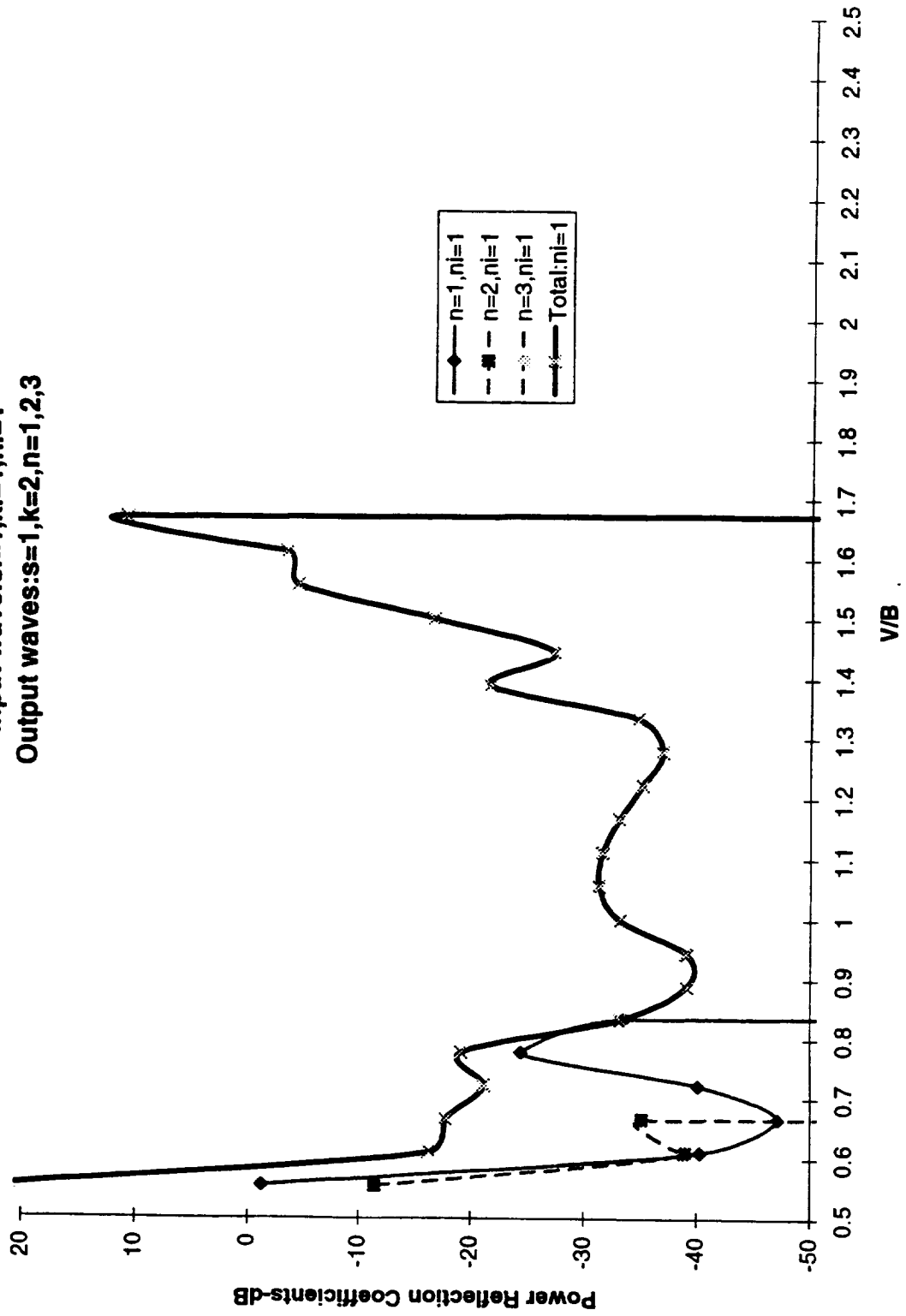
Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

Output waves: $s=1, k=1, n=1, 2, 3$



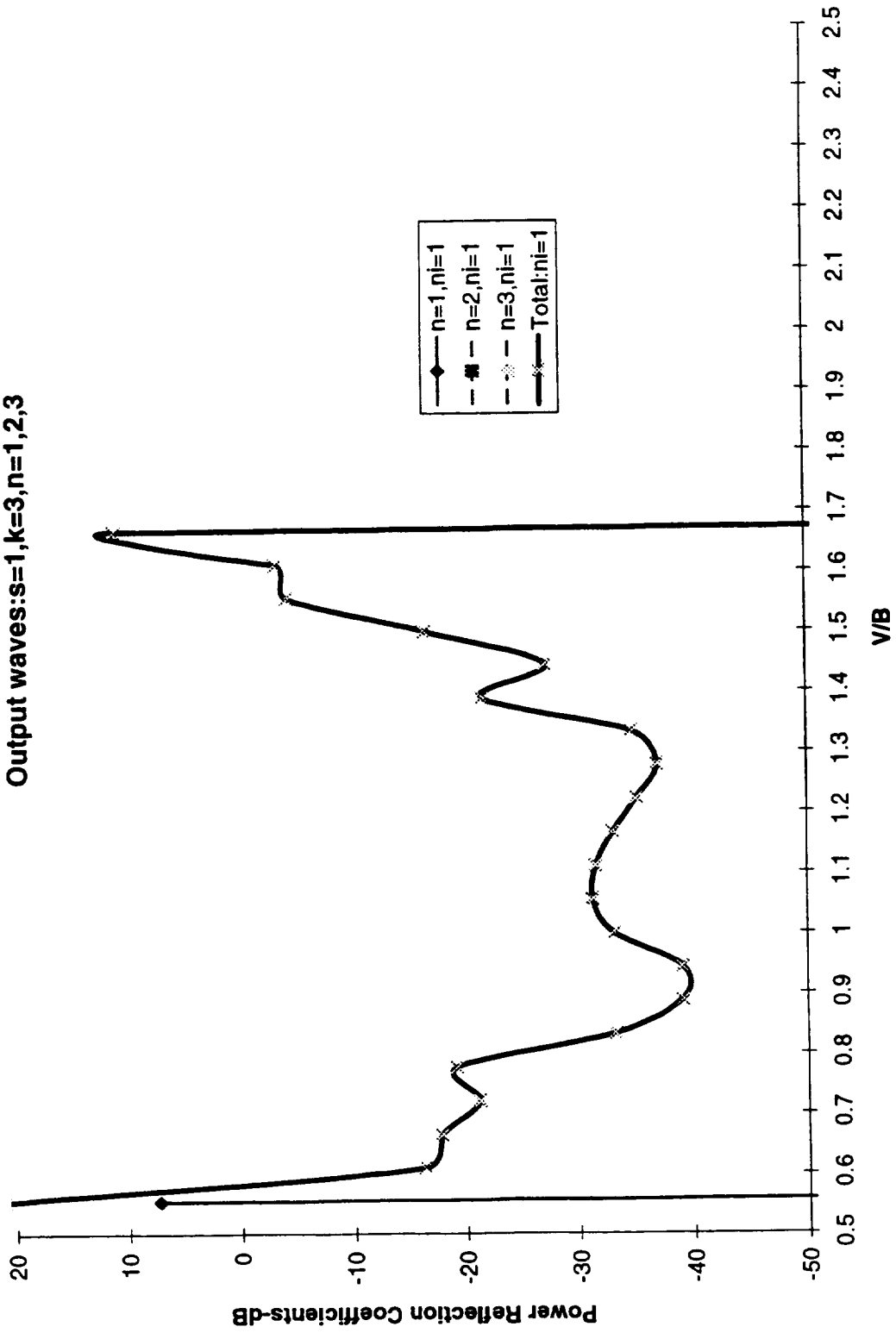
Stator Reflection-Mid Speed Case
Input wave: $s_i=1, k_i=1, n_i=1$
Output wave: $s=1, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

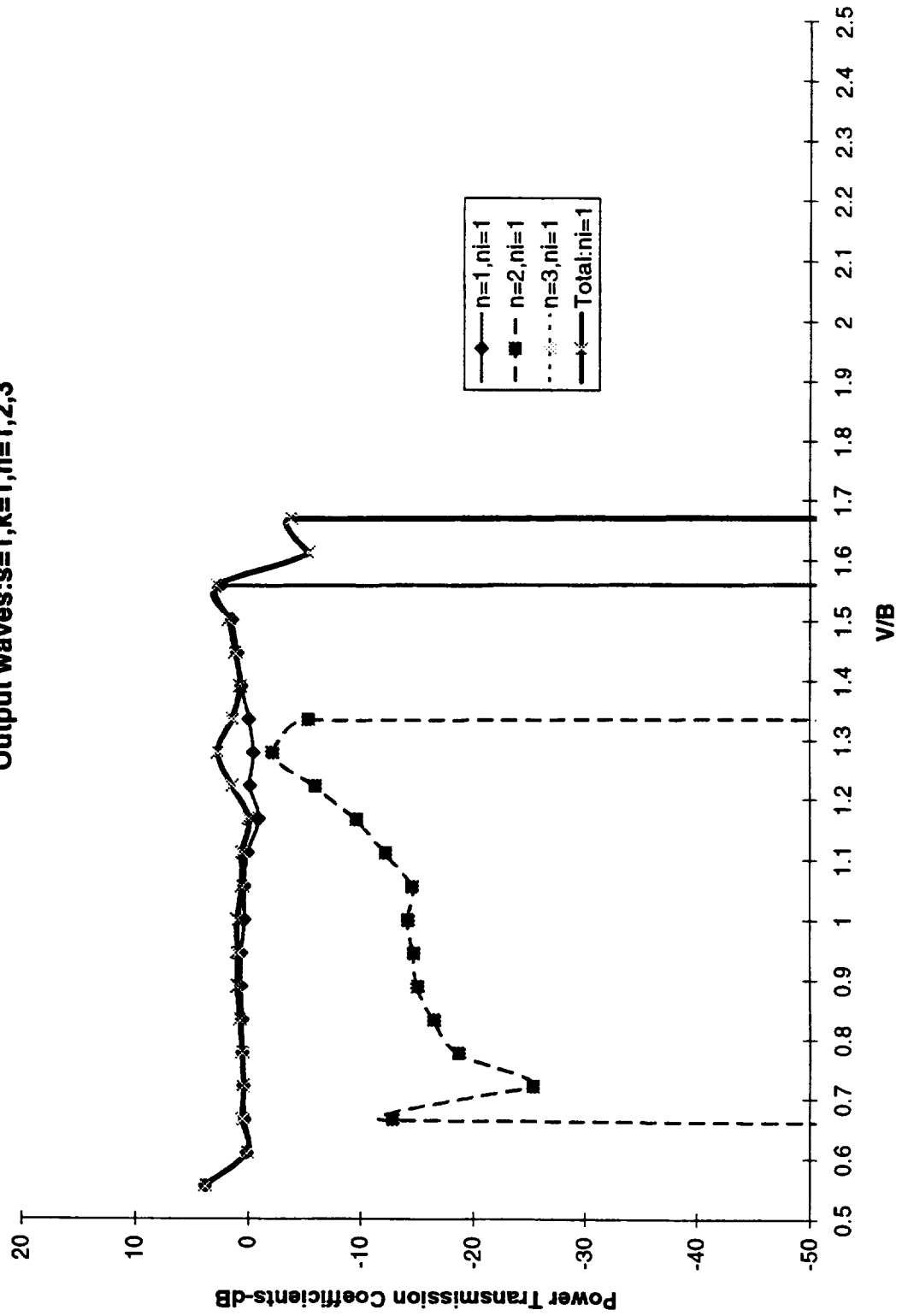
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

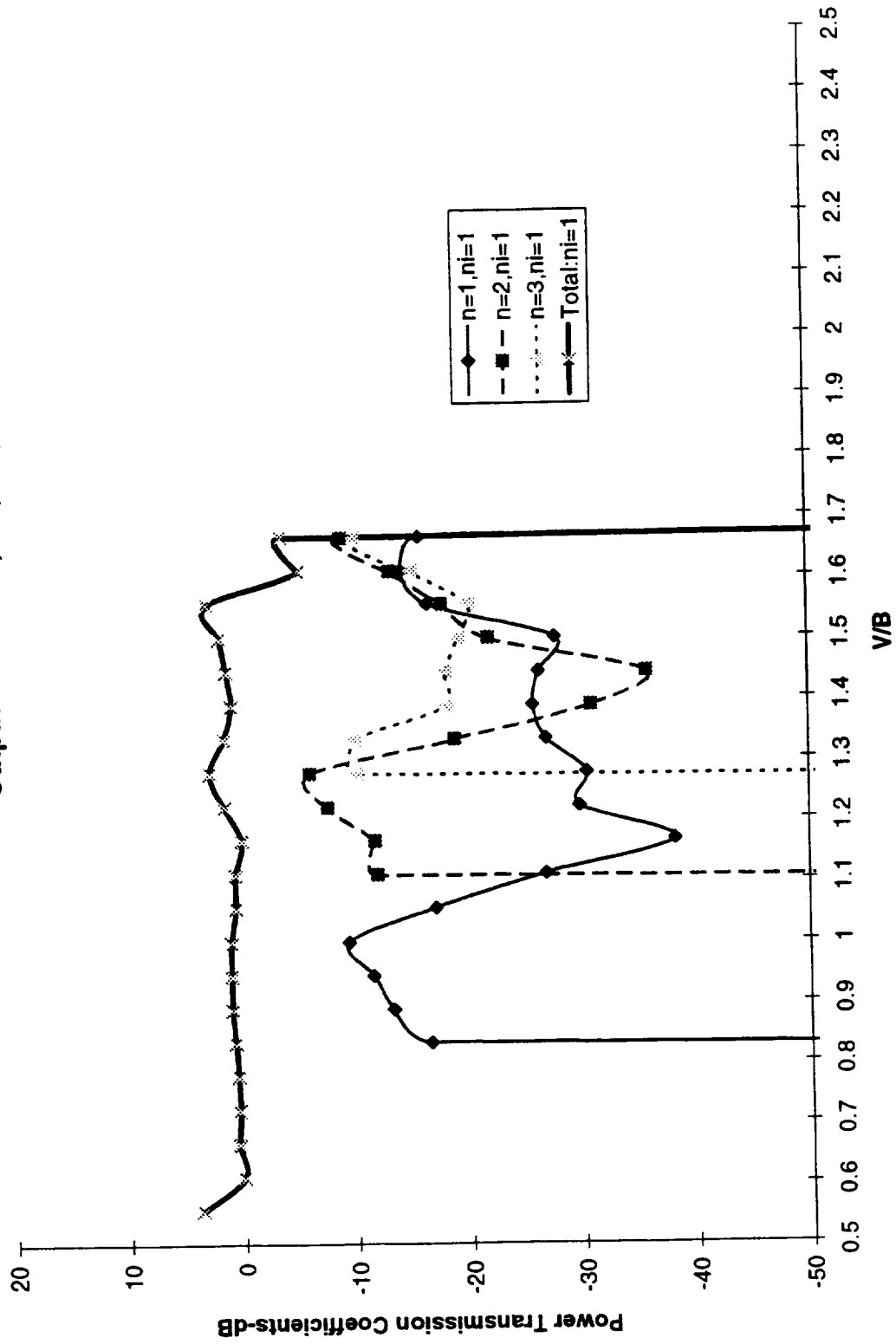
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

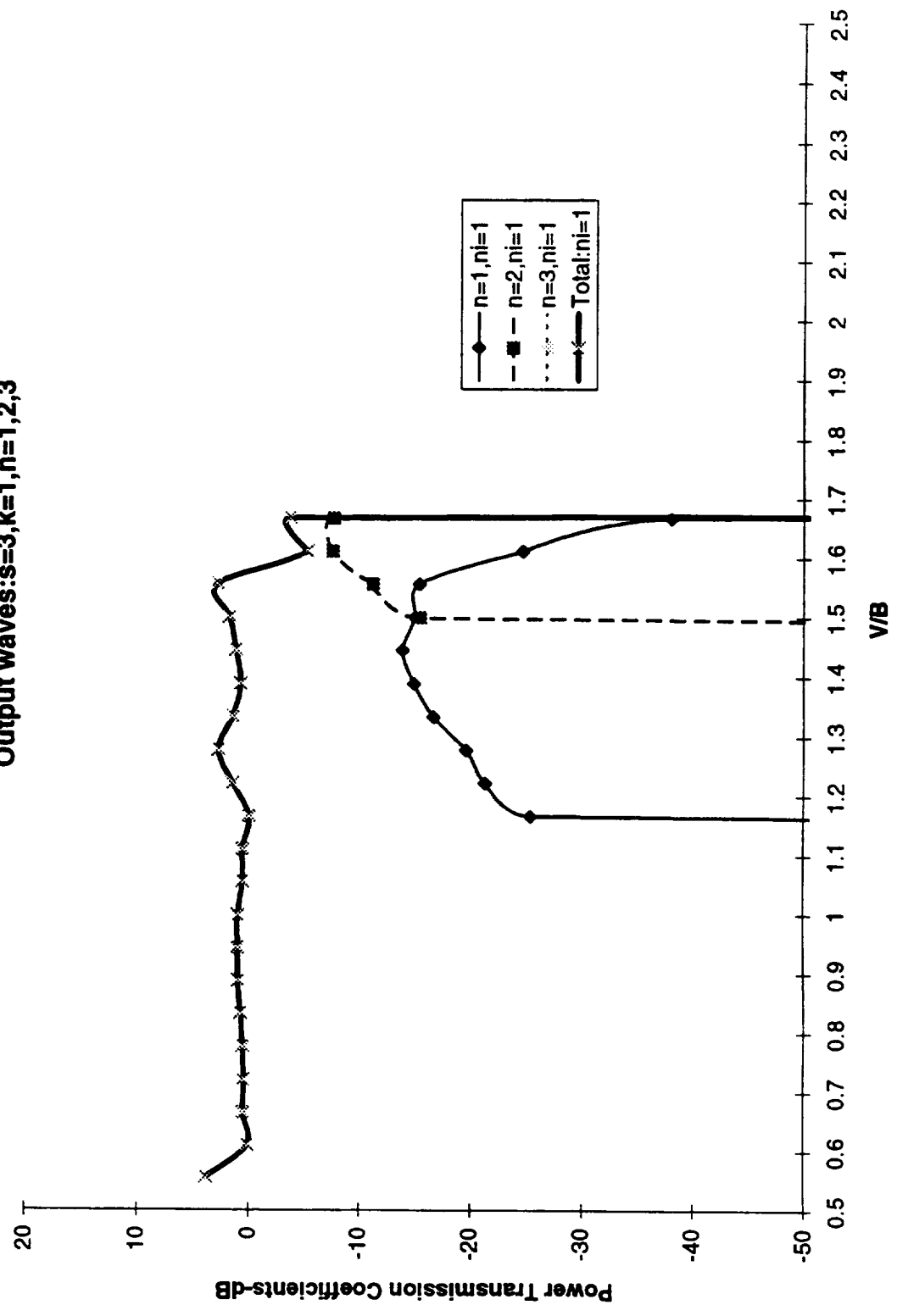
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

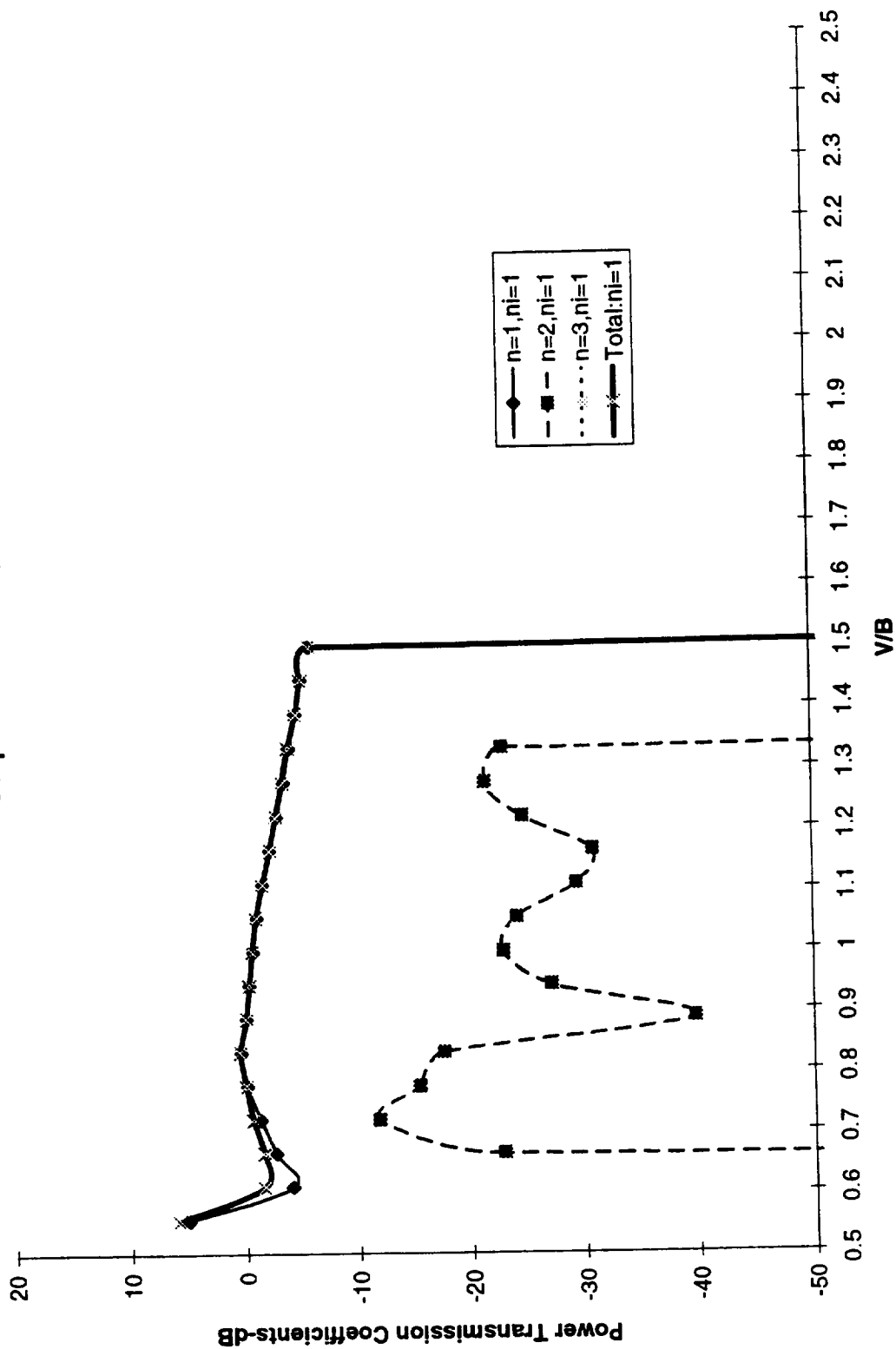
Output wave: $s=3, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

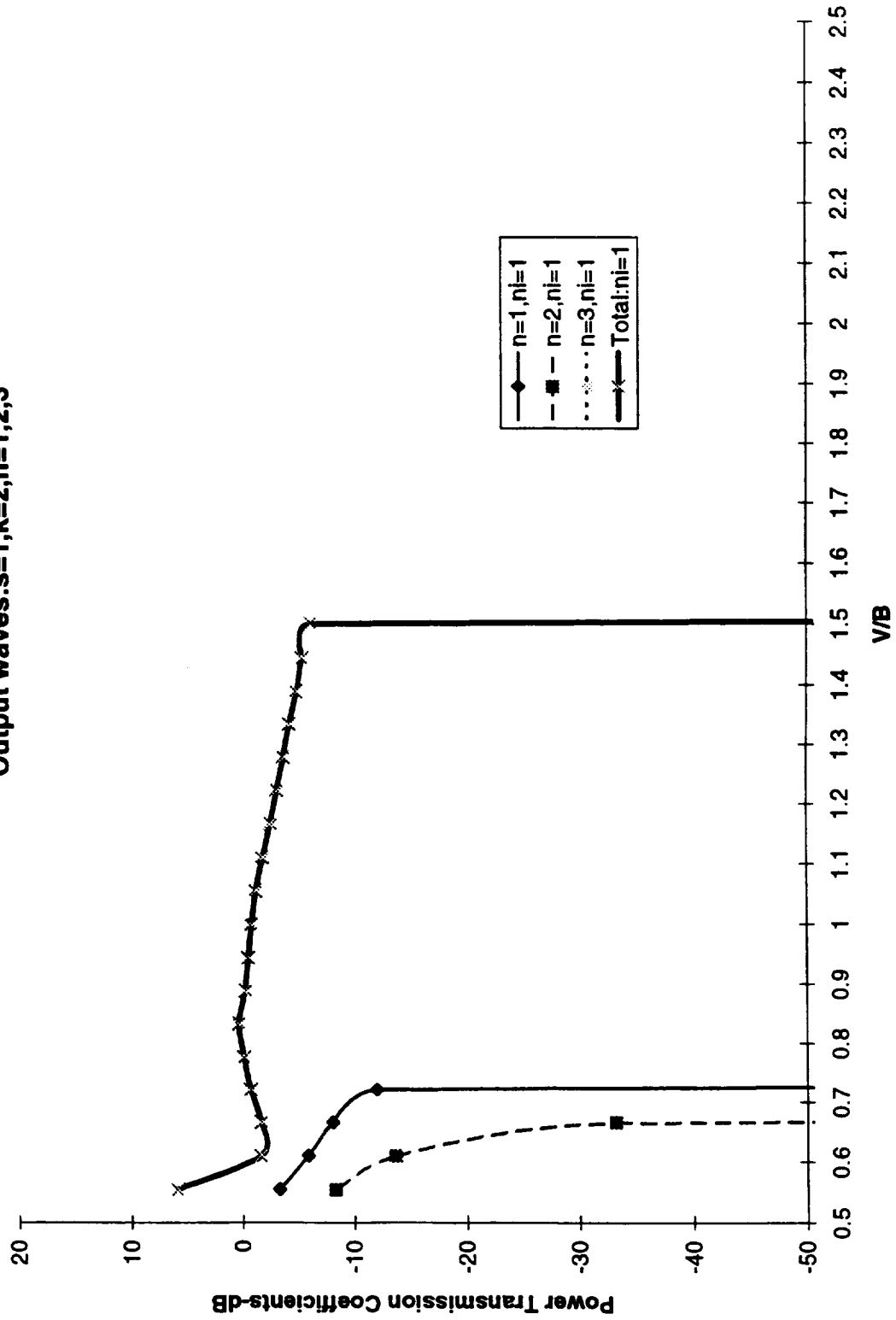
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

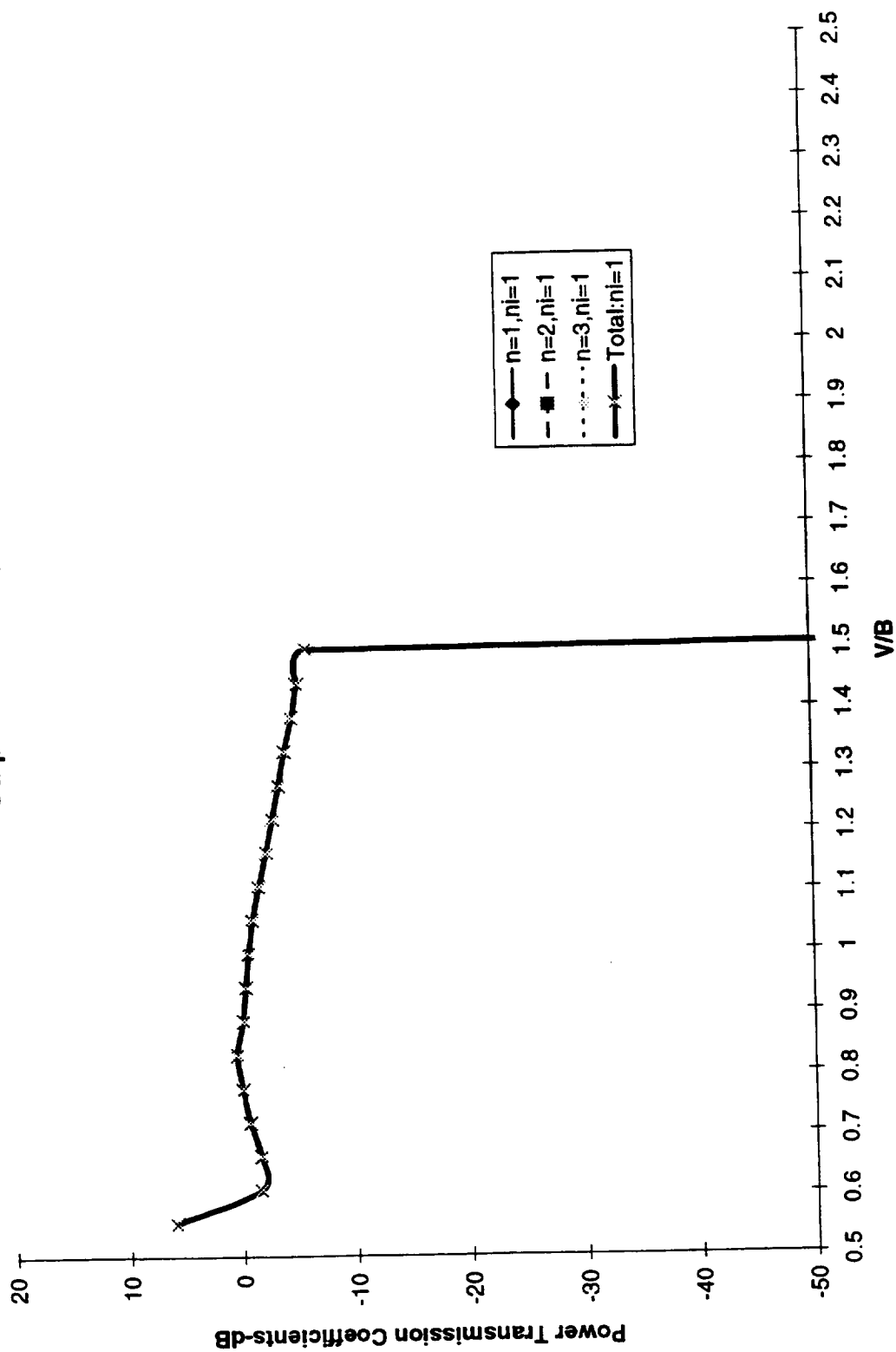
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=1$

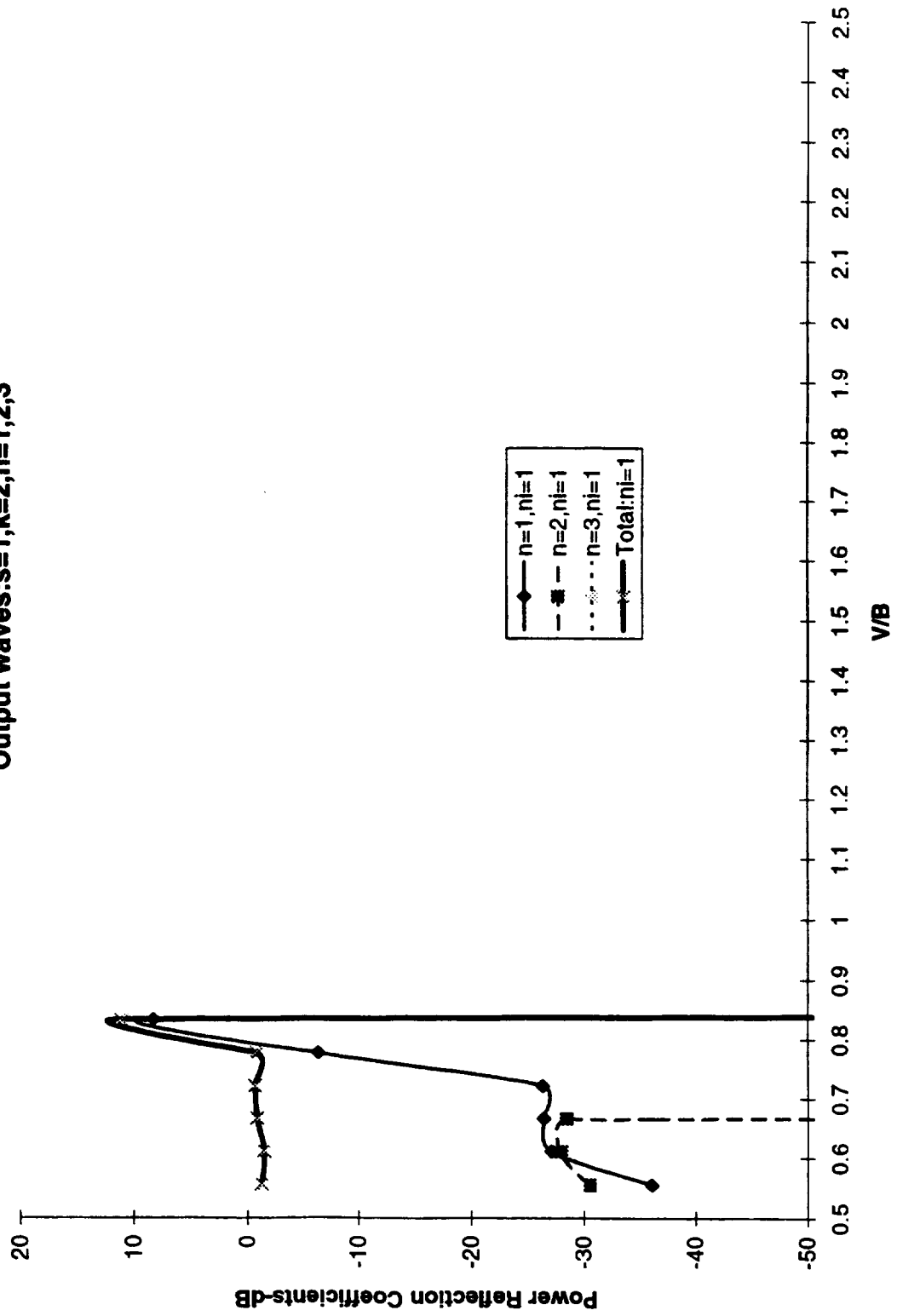
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection- Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

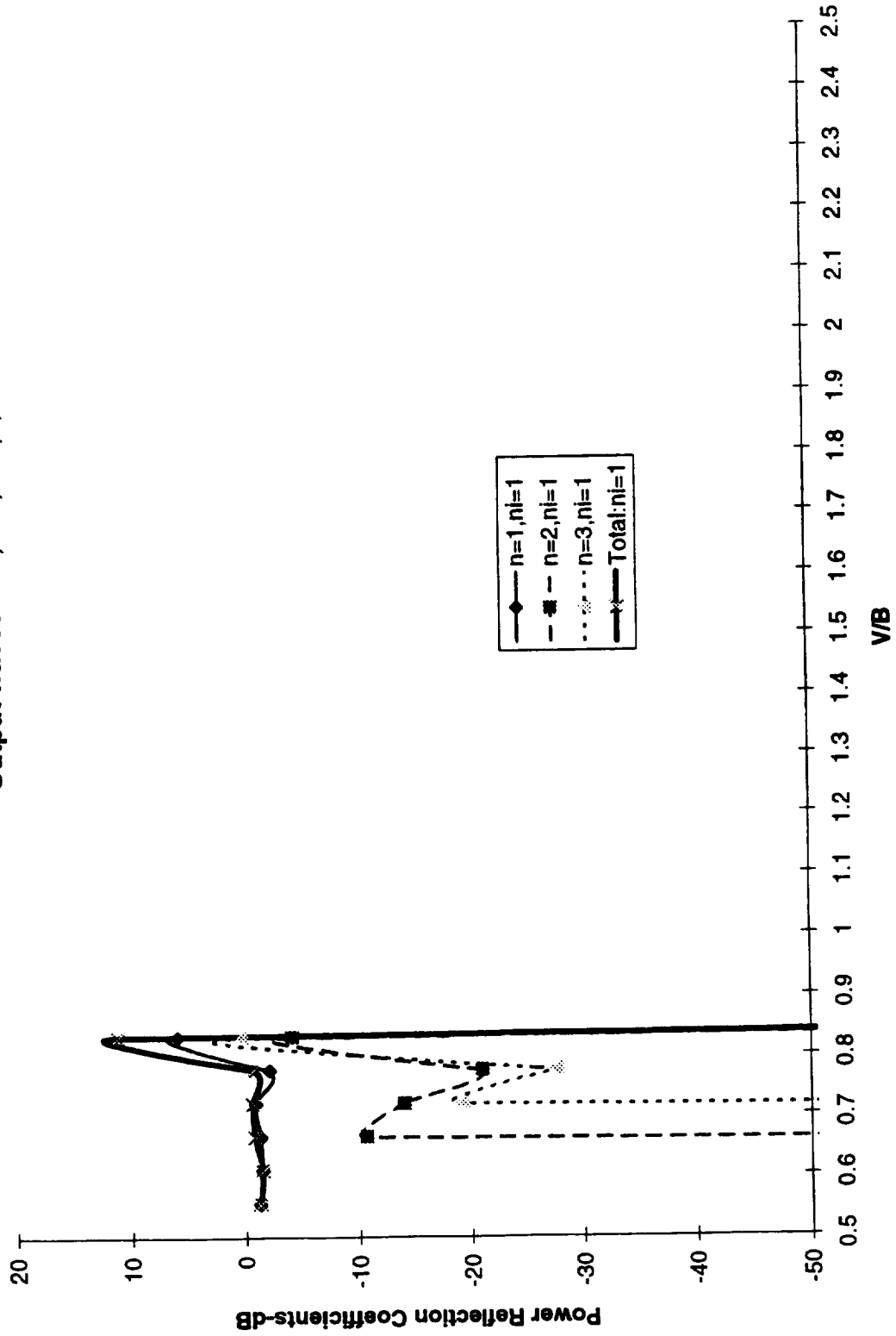
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection- Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

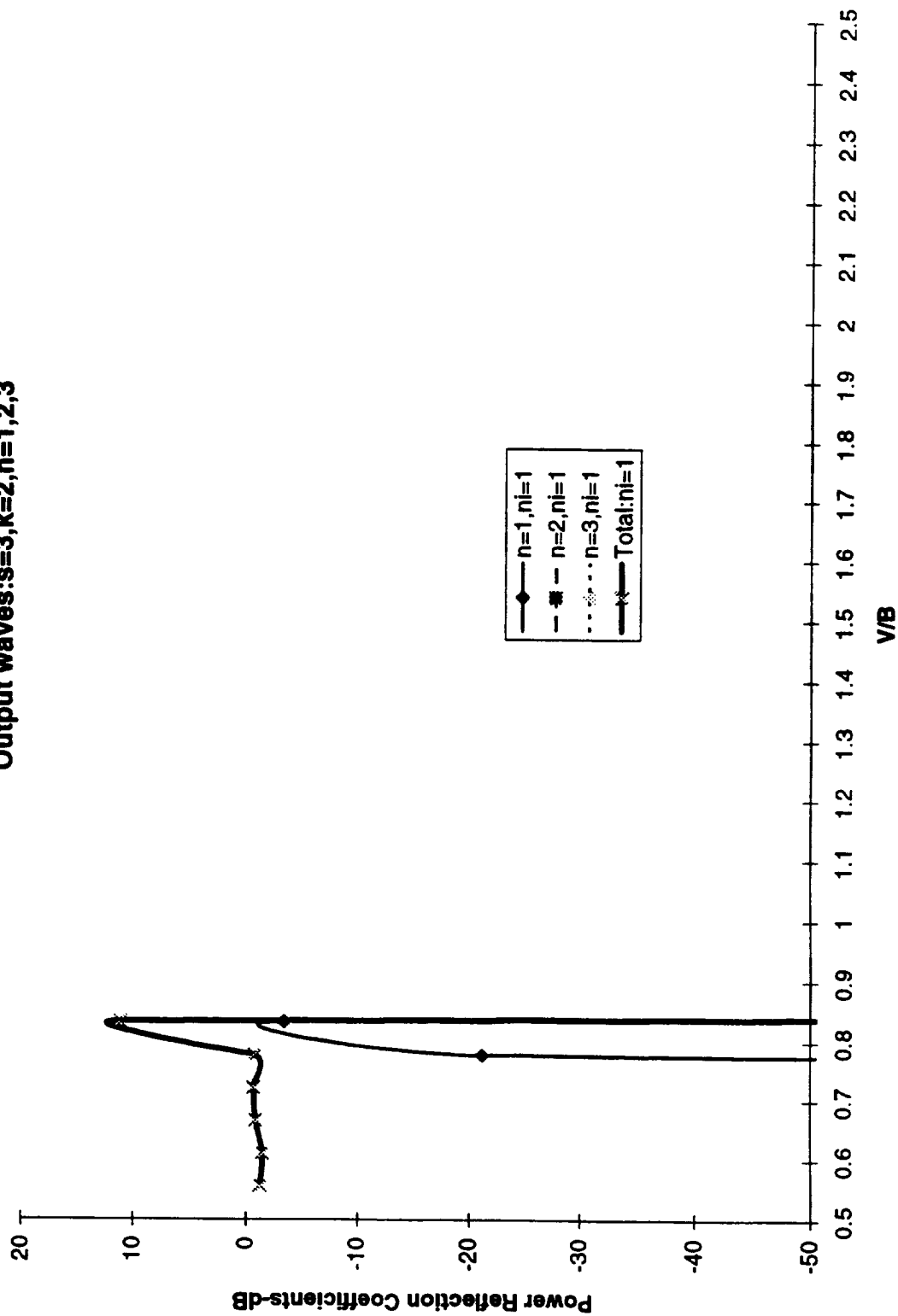
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

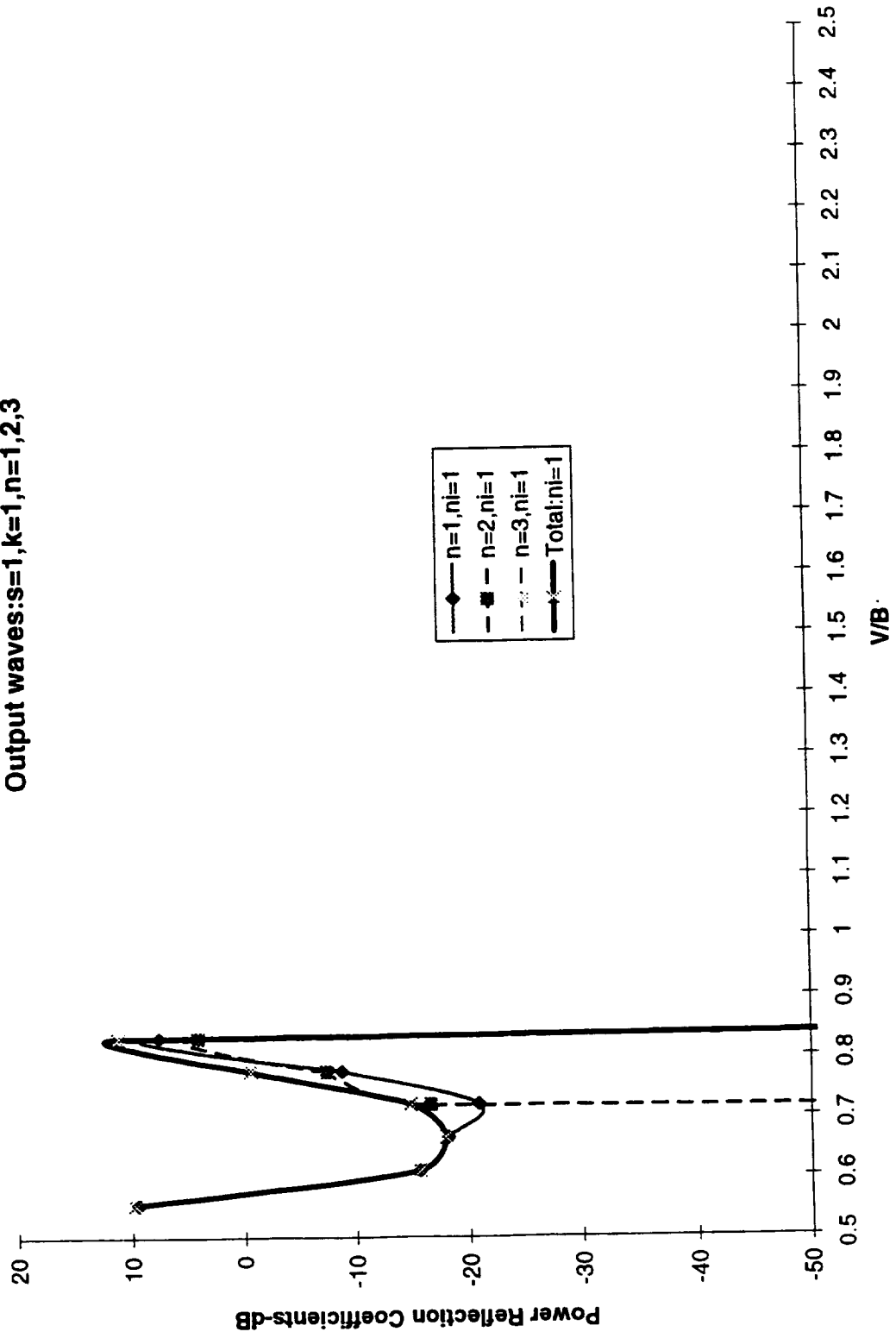
Output waves: $s=3, k=2, n=1, 2, 3$



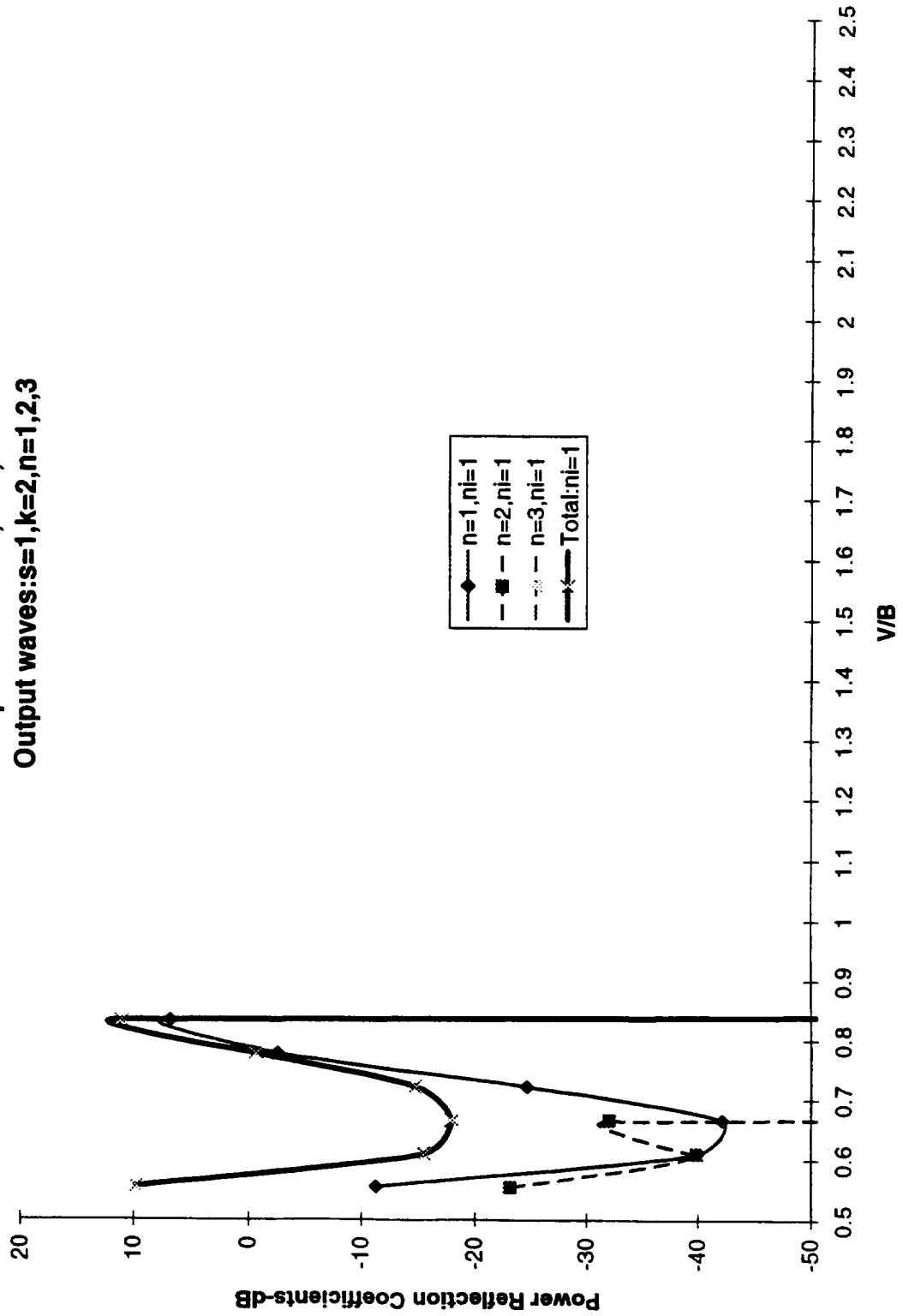
Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

Output waves: $s=1, k=1, n=1, 2, 3$



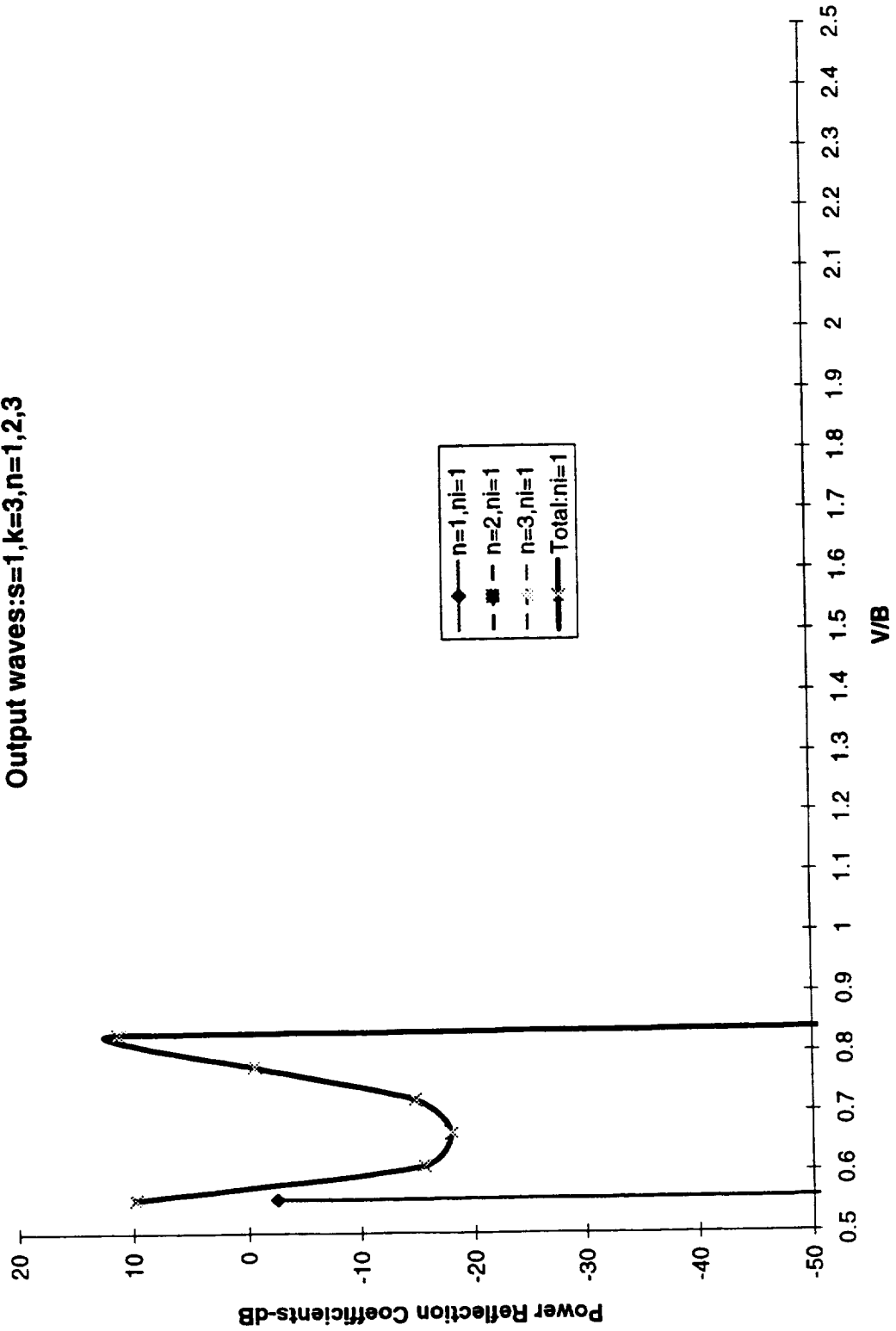
Stator Reflection-Mid Speed Case
Input wave: $s_i=1, k_i=2, n_i=1$
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

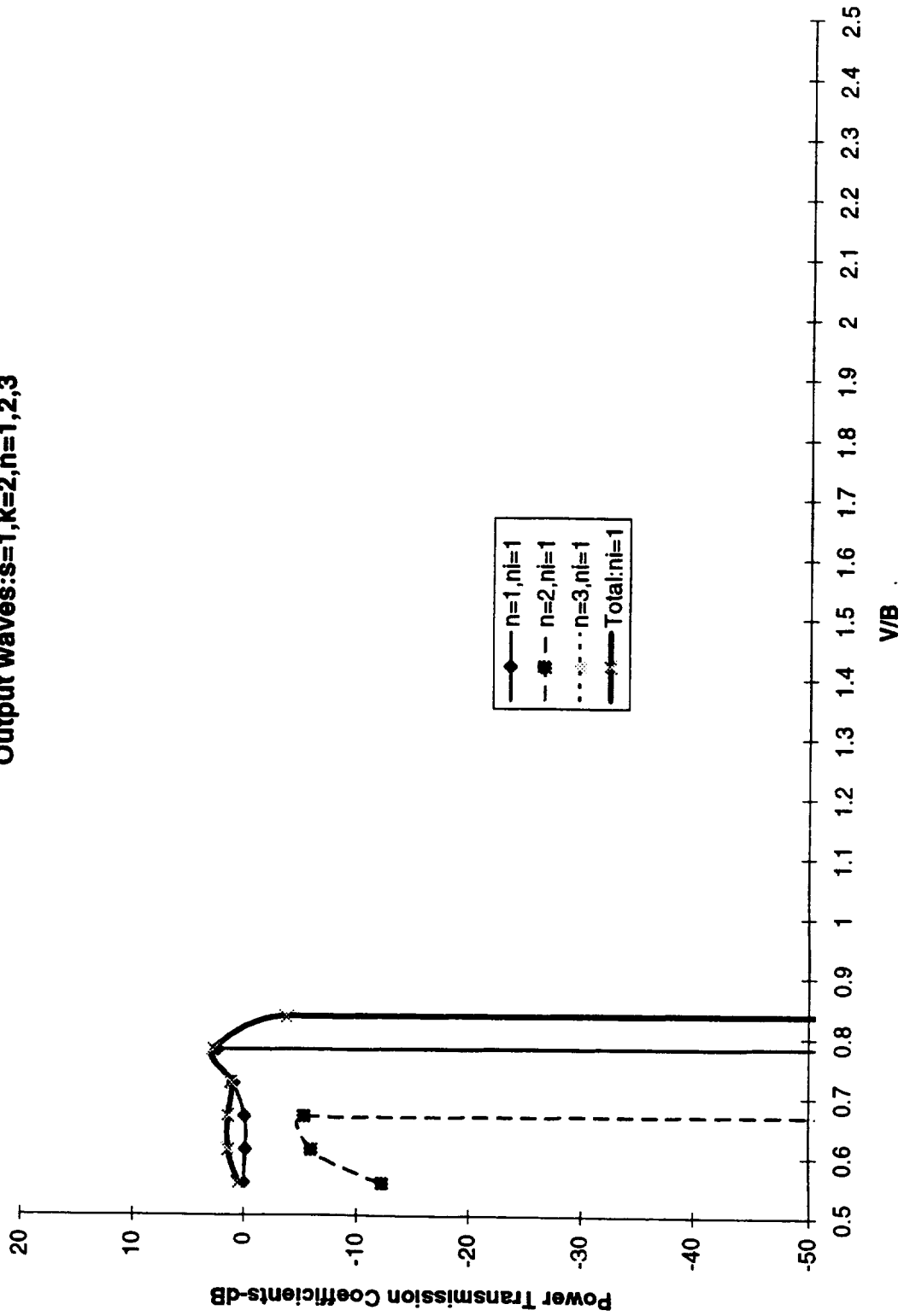
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

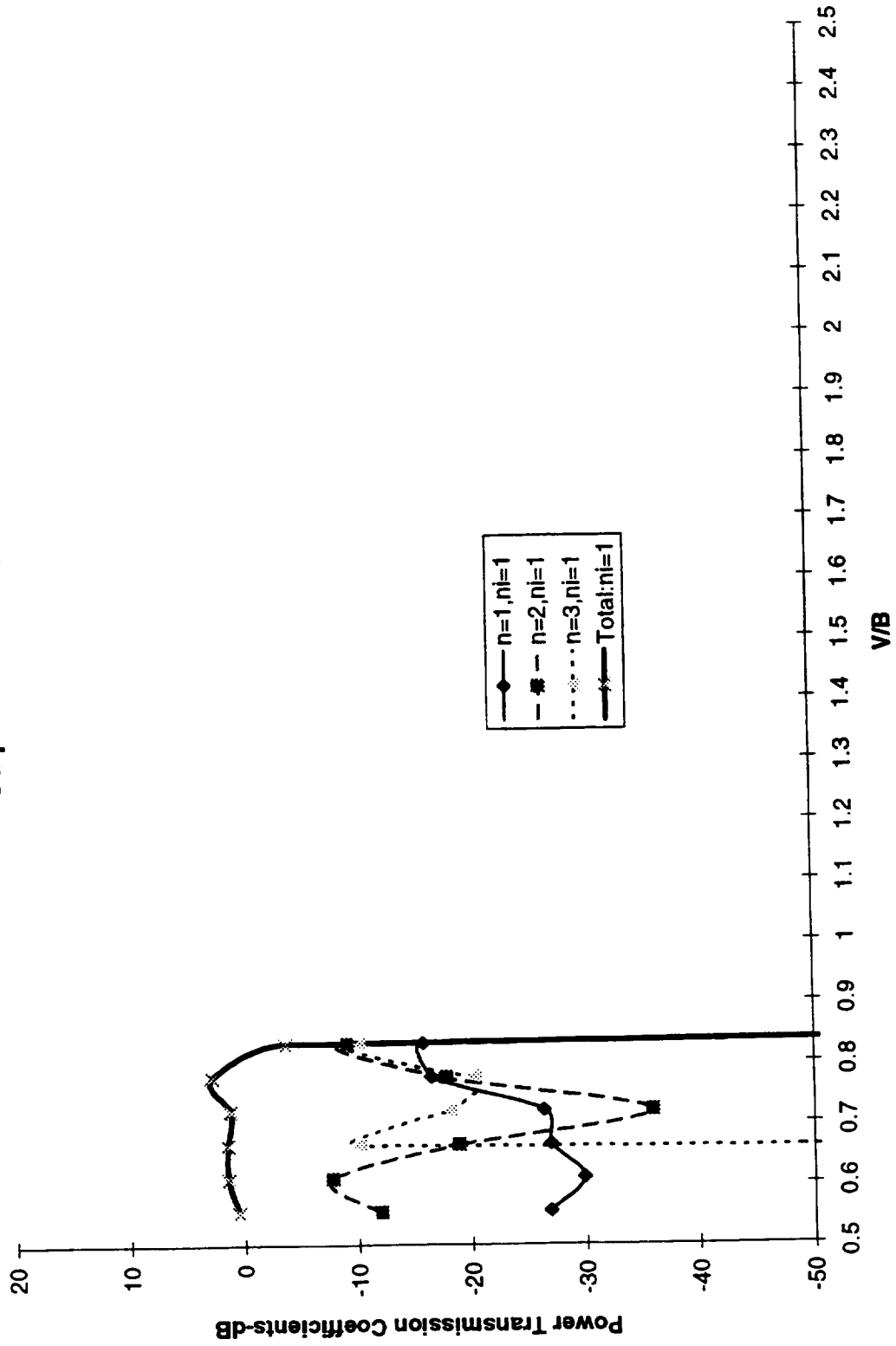
Output wave: $s=1, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

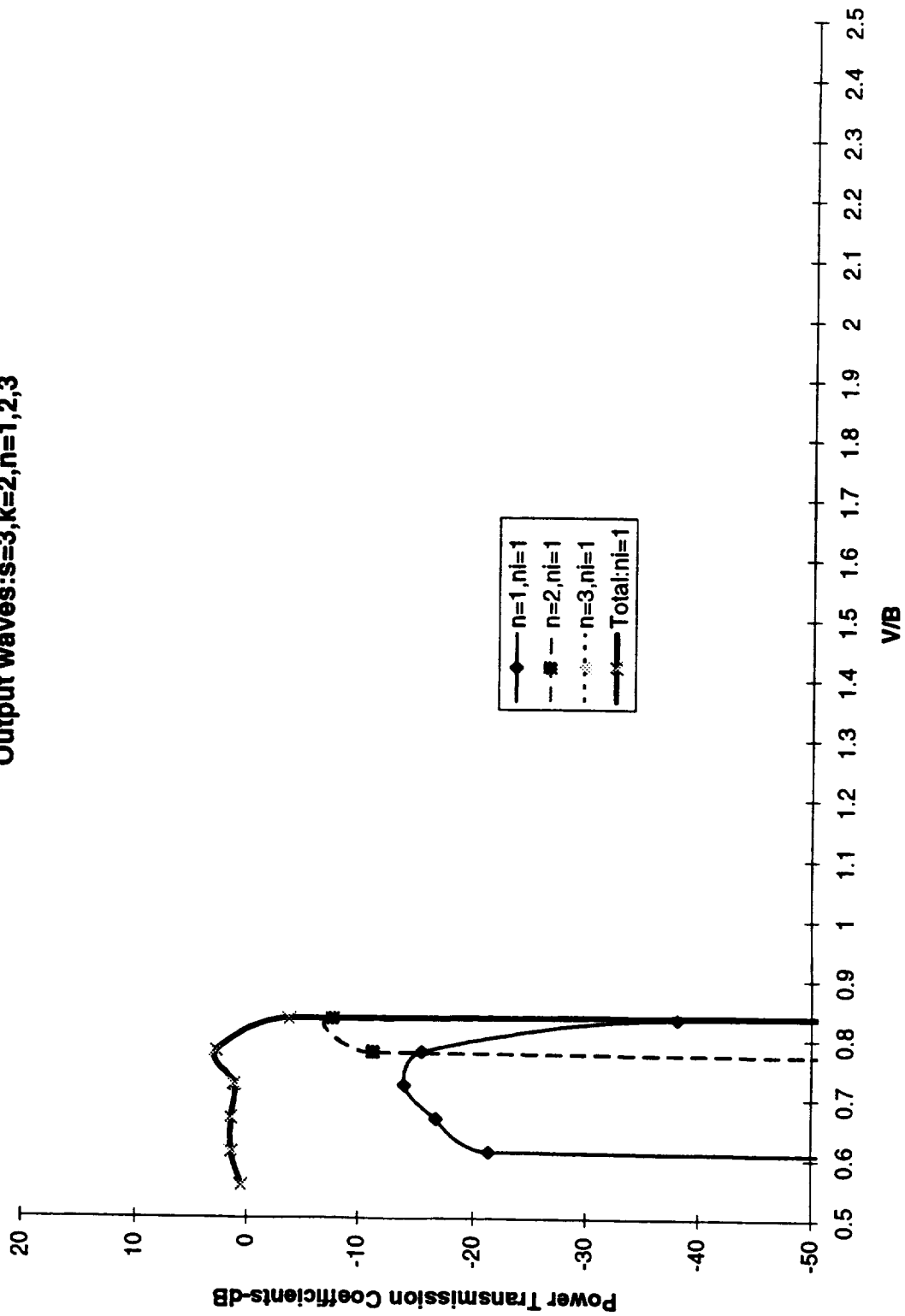
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=1, k_l=2, n_l=1$

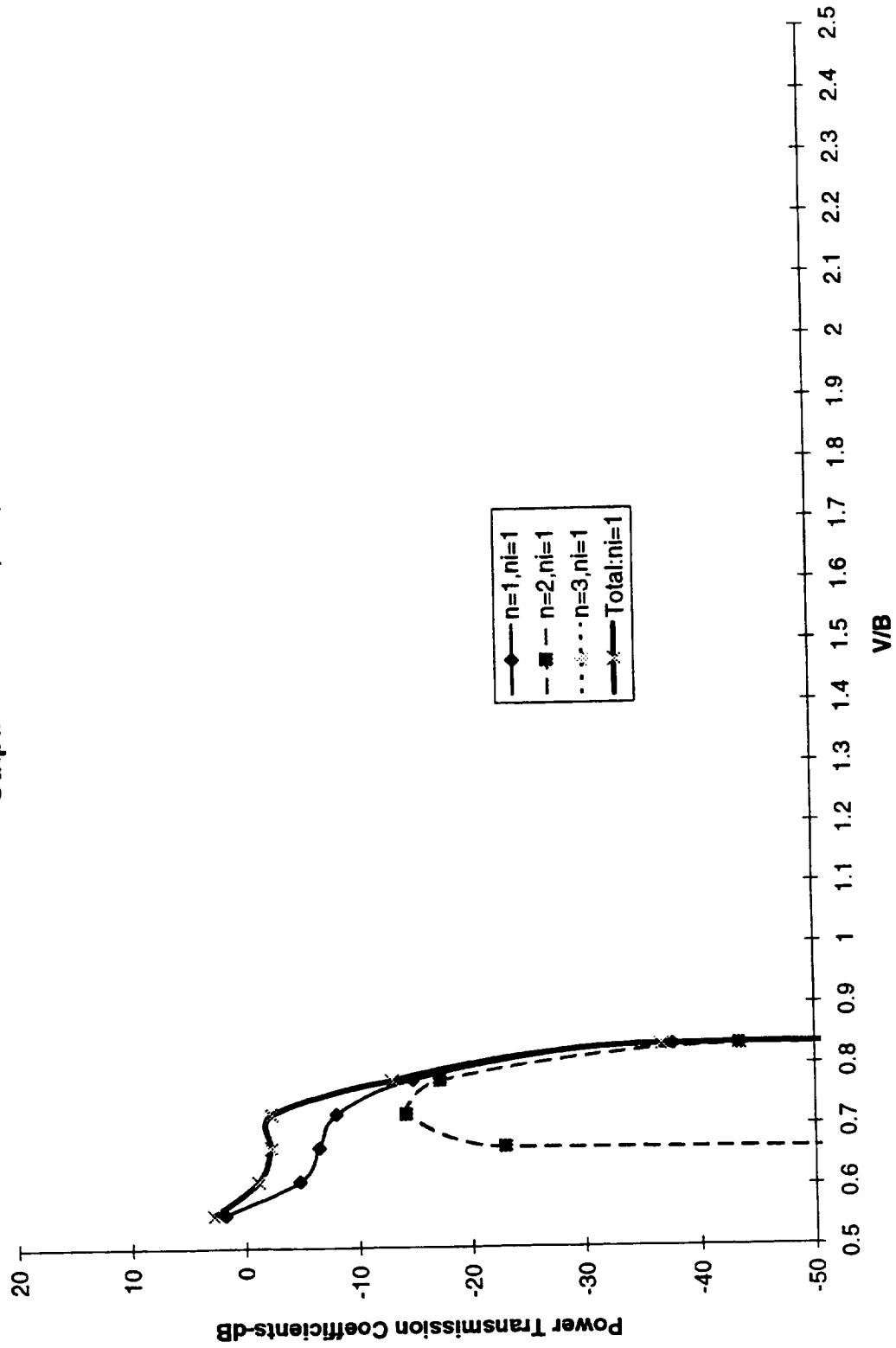
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

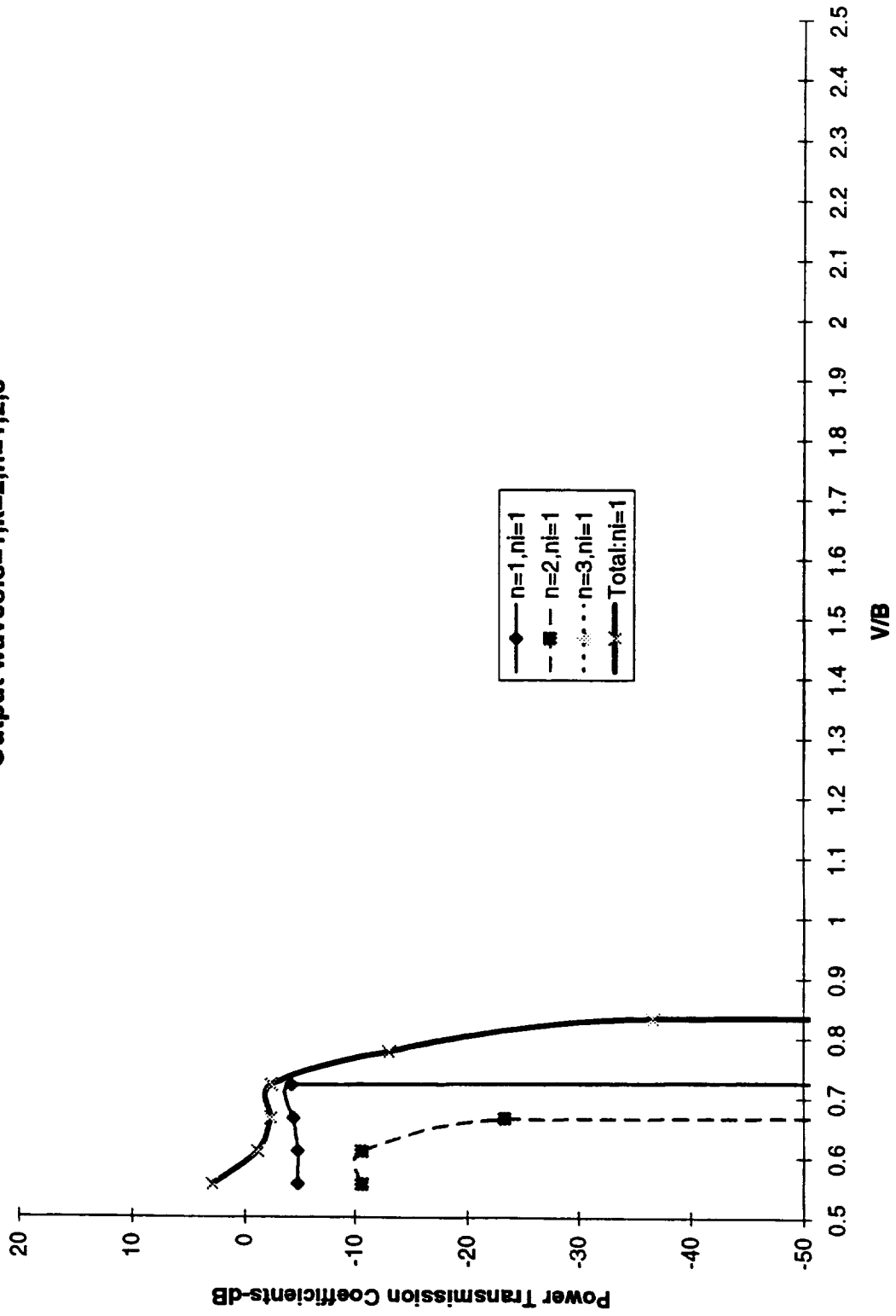
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

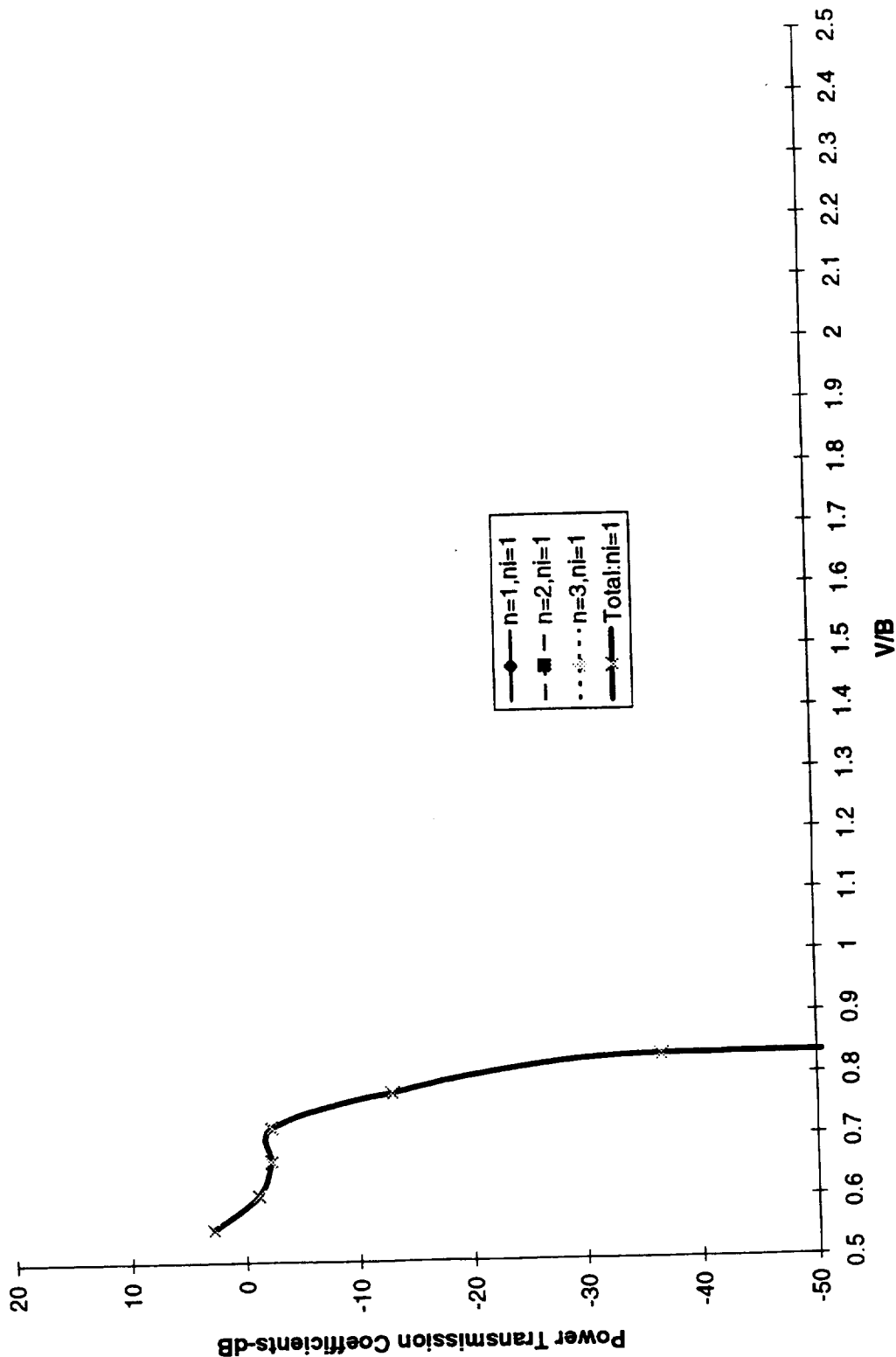
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=1$

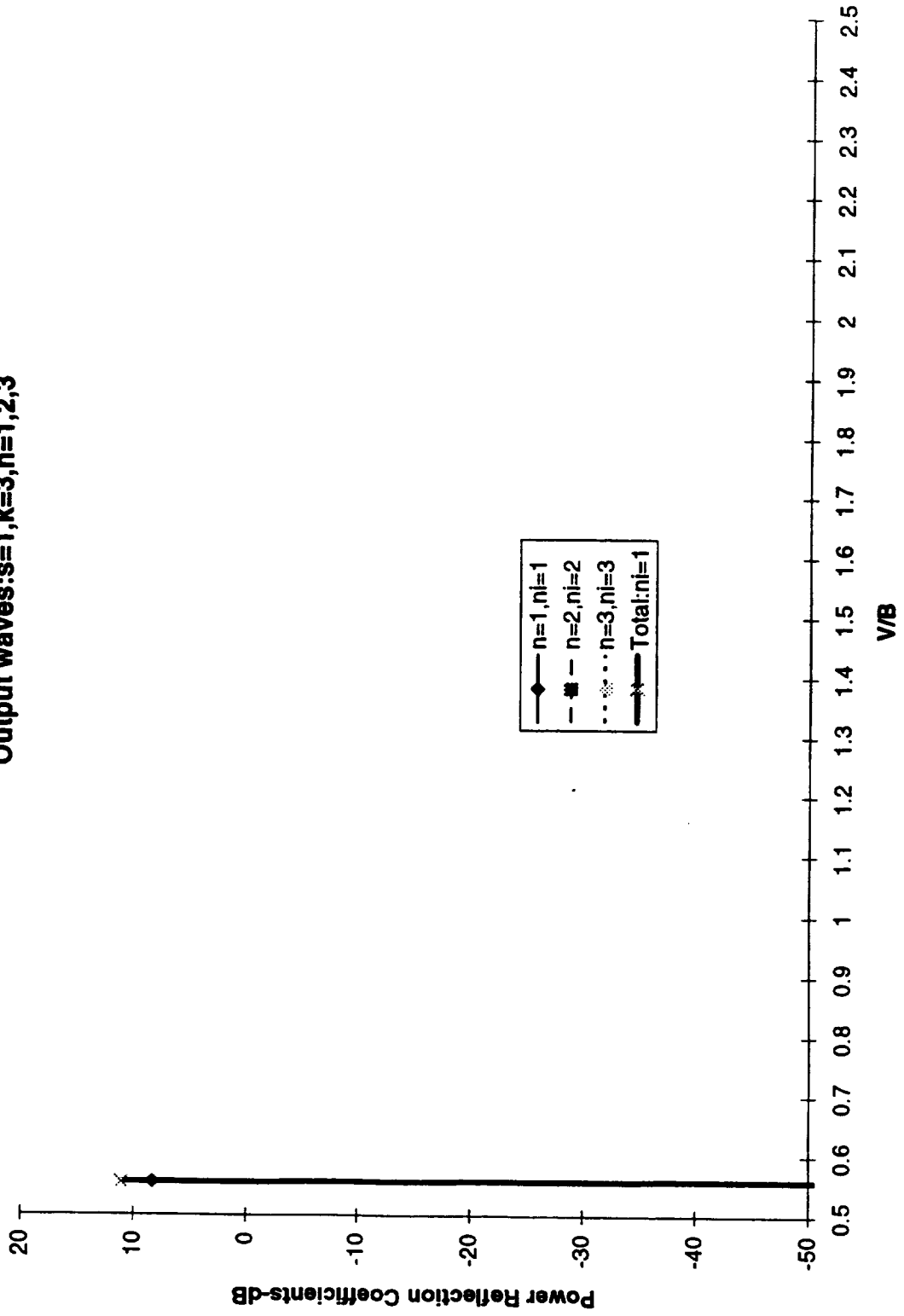
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

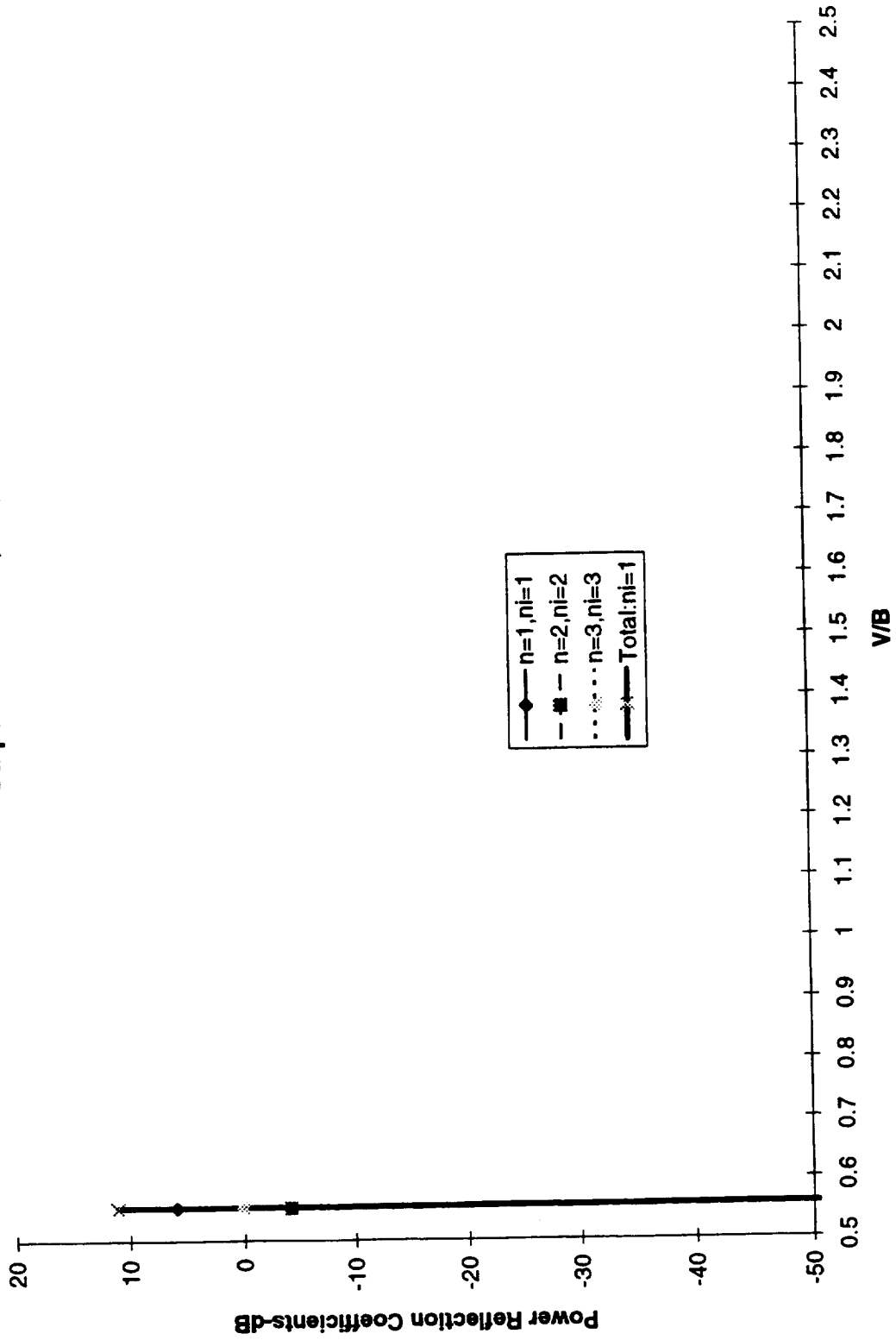
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

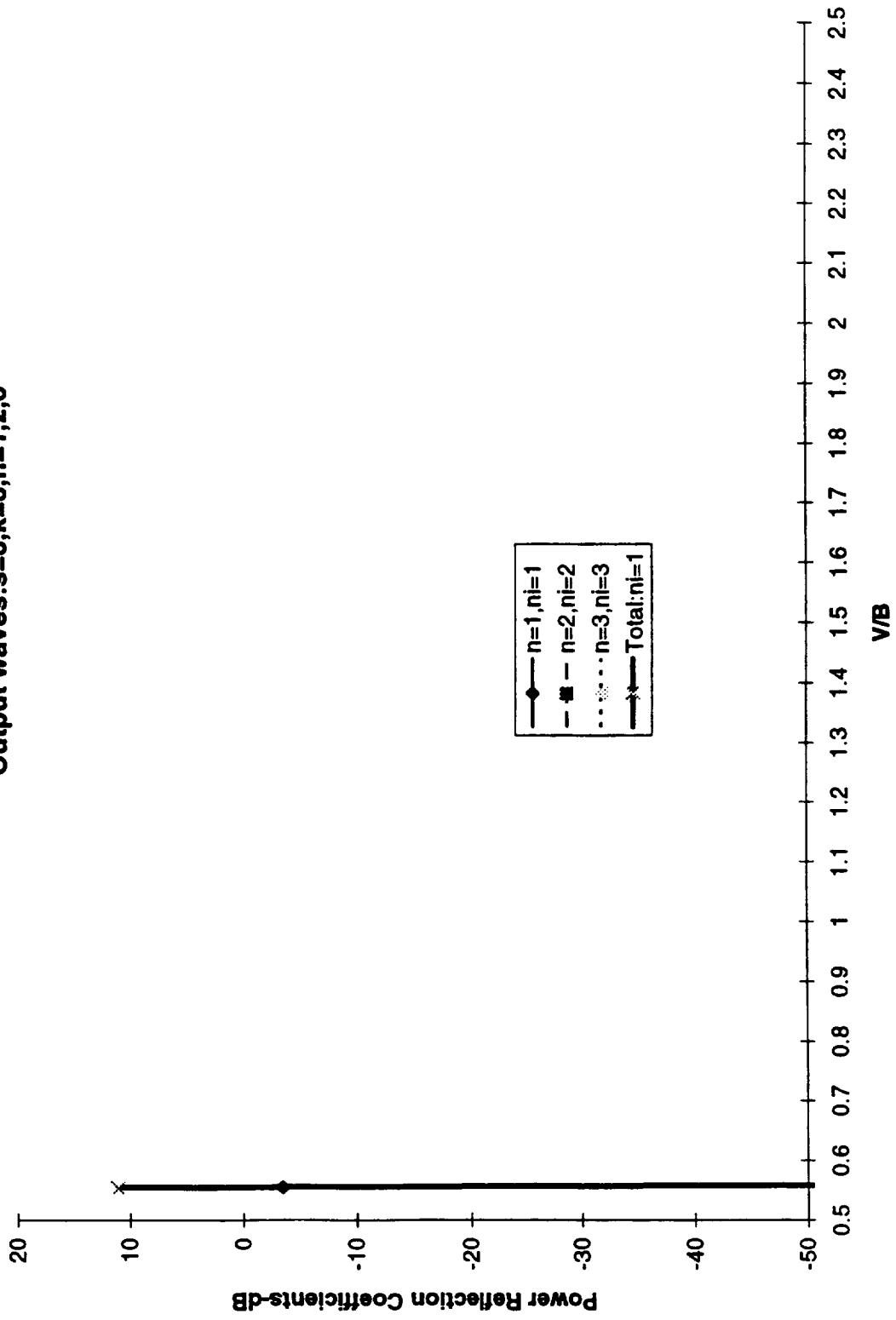
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=1, k_l=3, n_l=1$

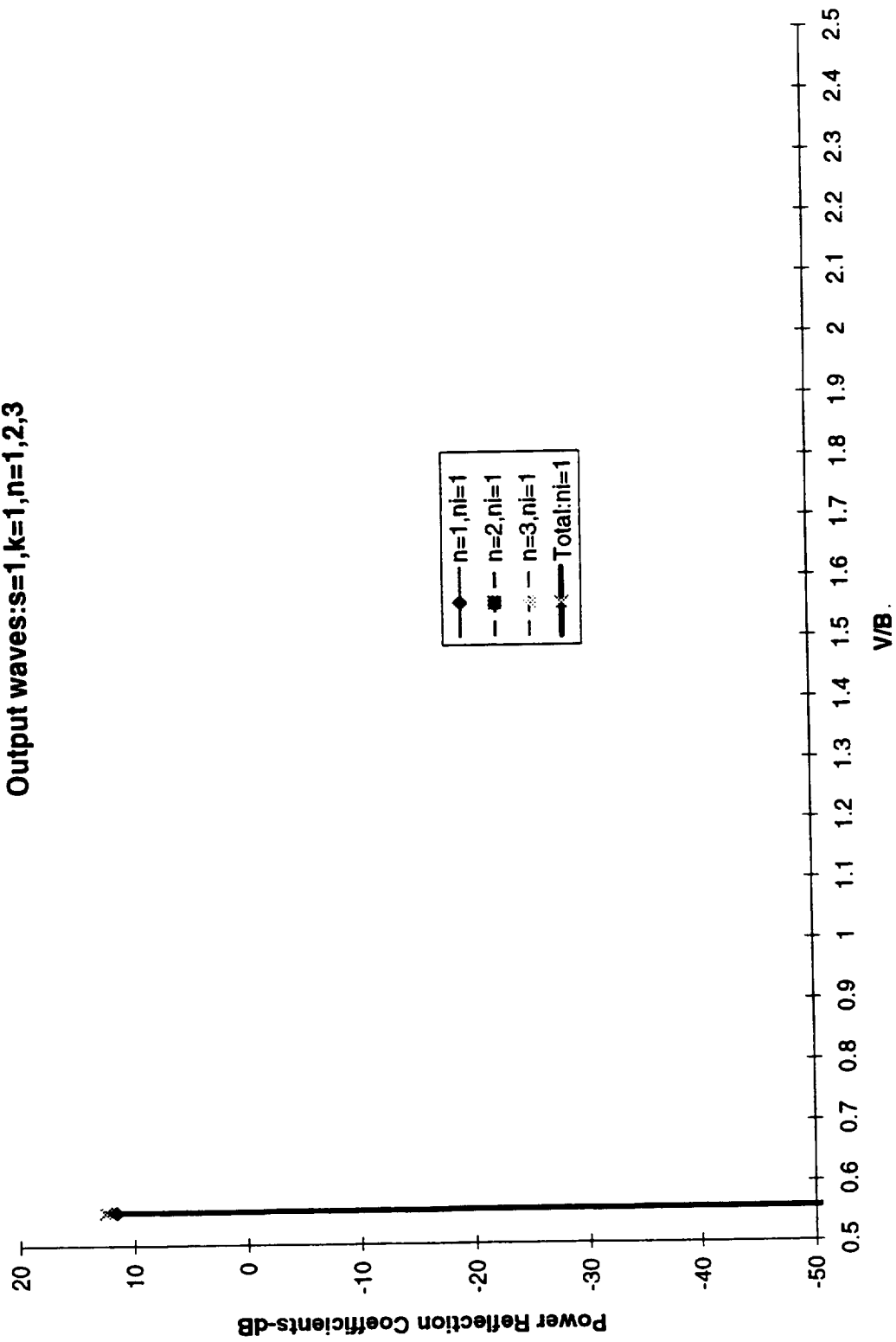
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

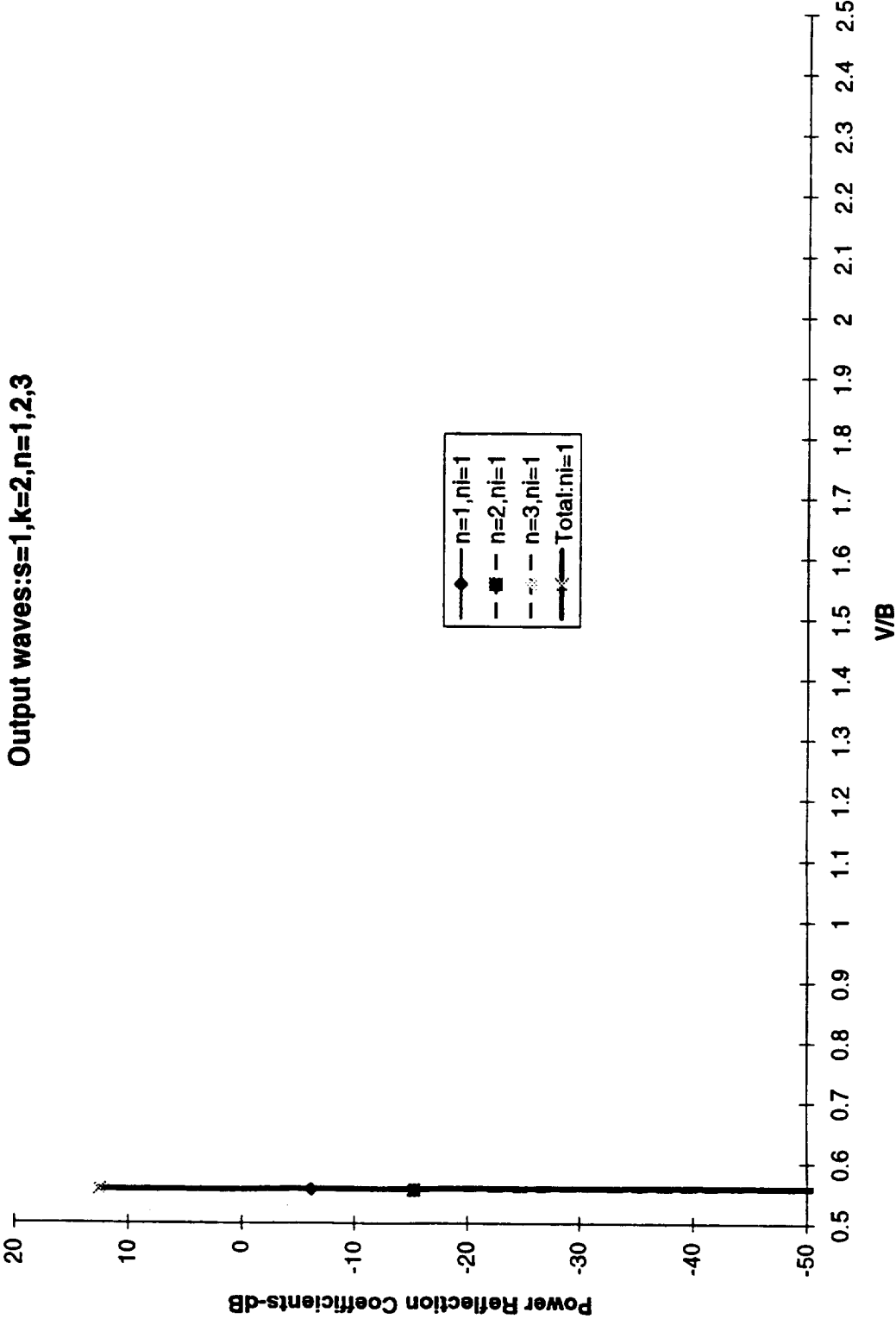
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

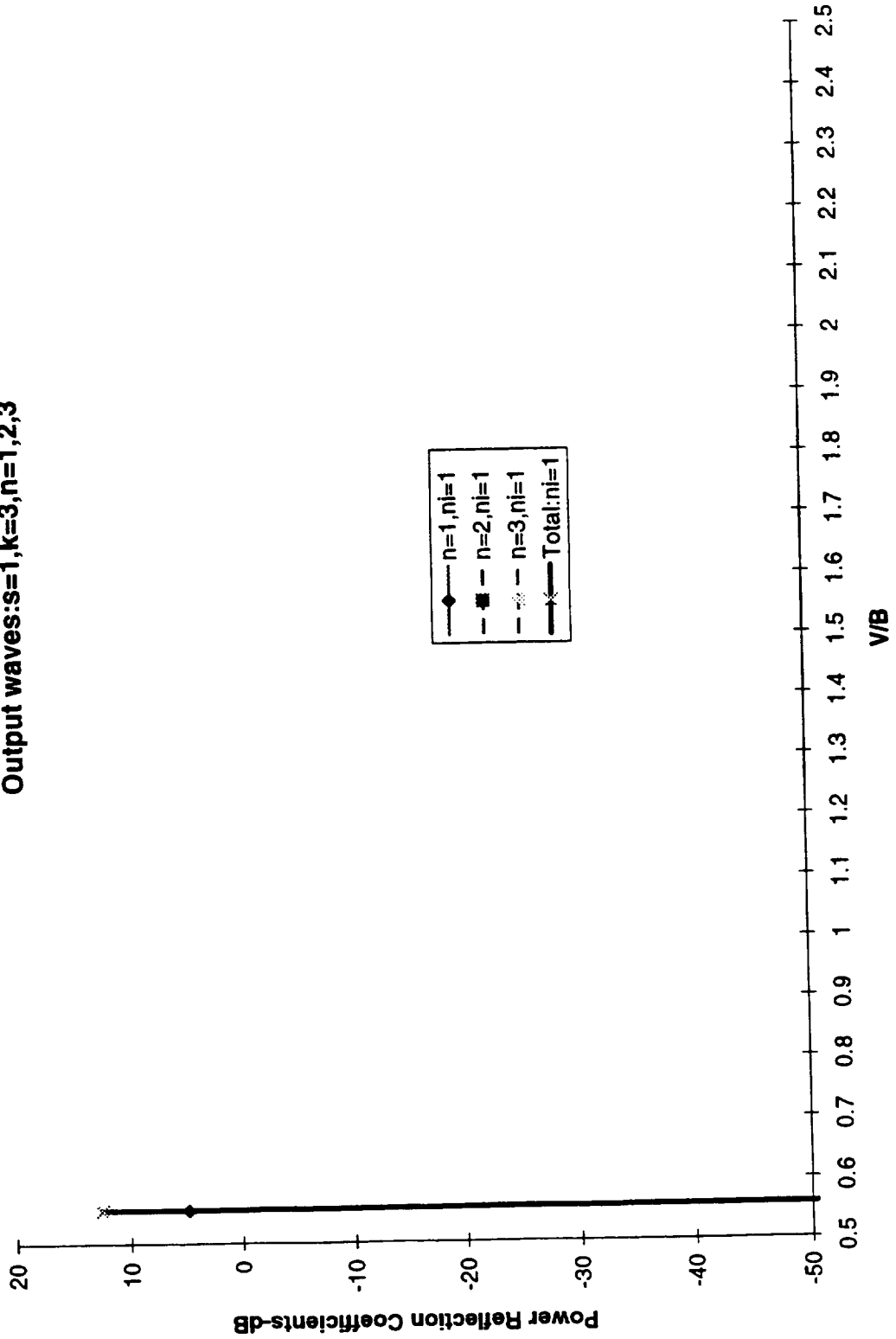
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $sl=1, kl=3, nl=1$

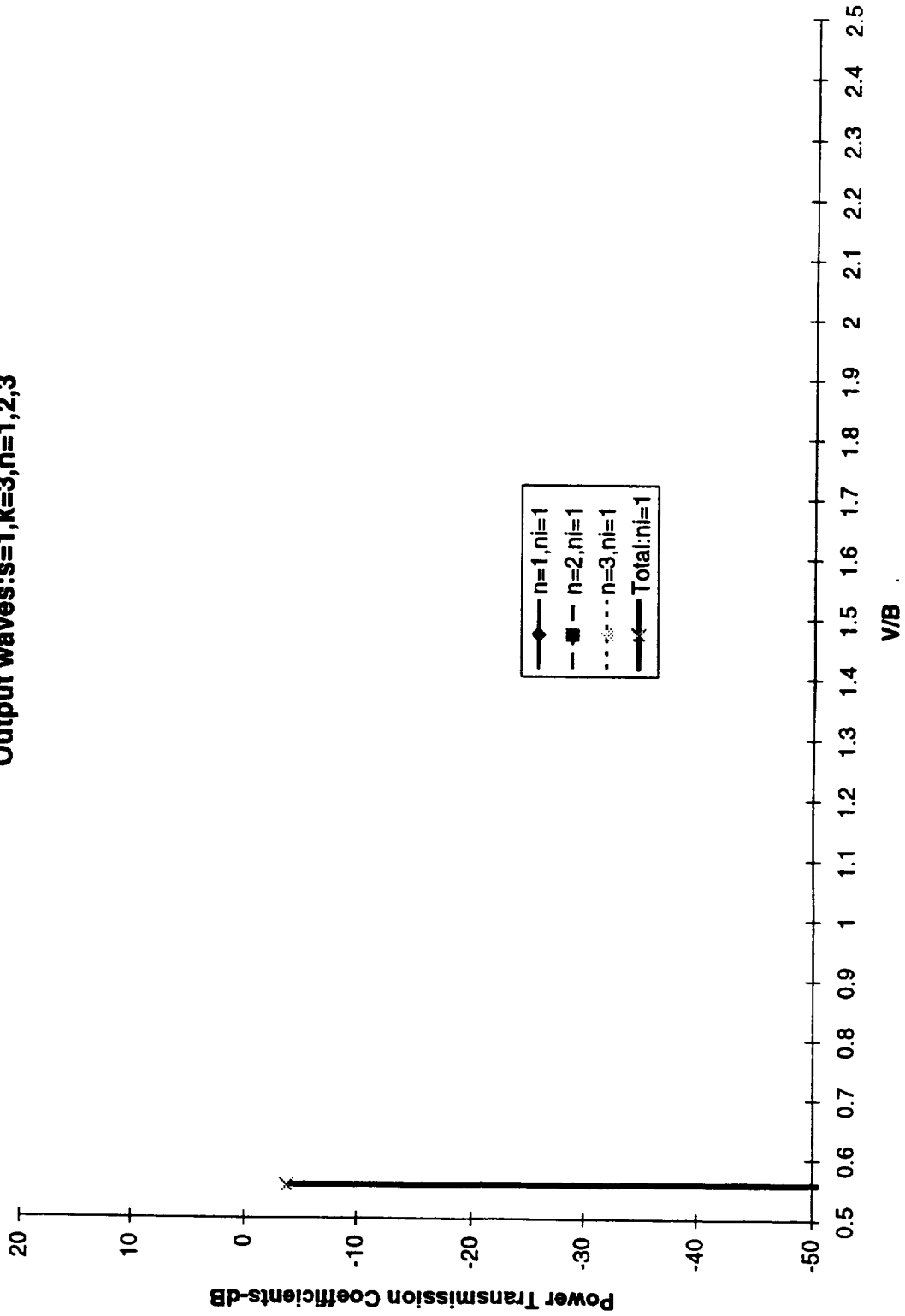
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=1, k_l=3, n_l=1$

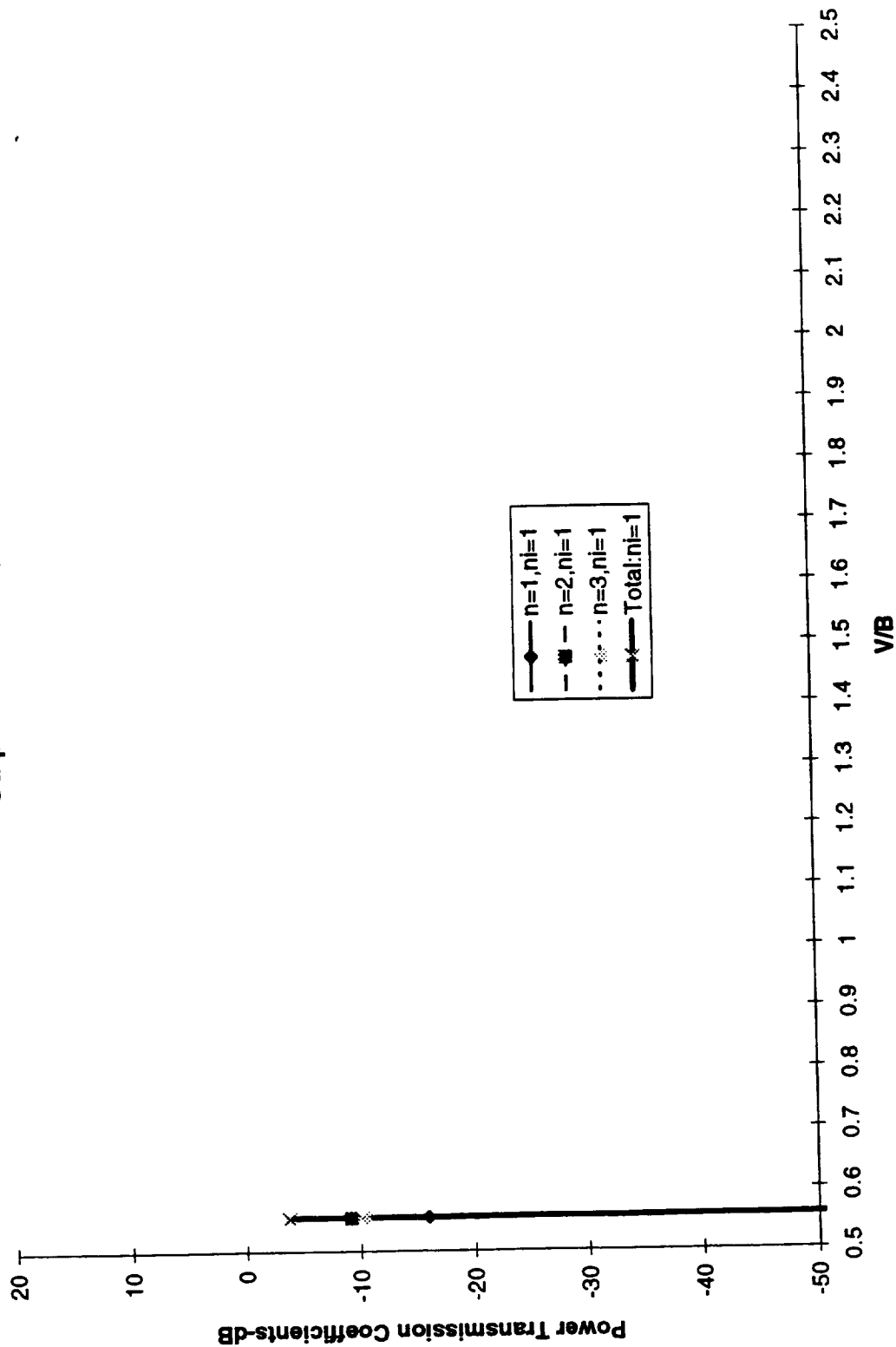
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

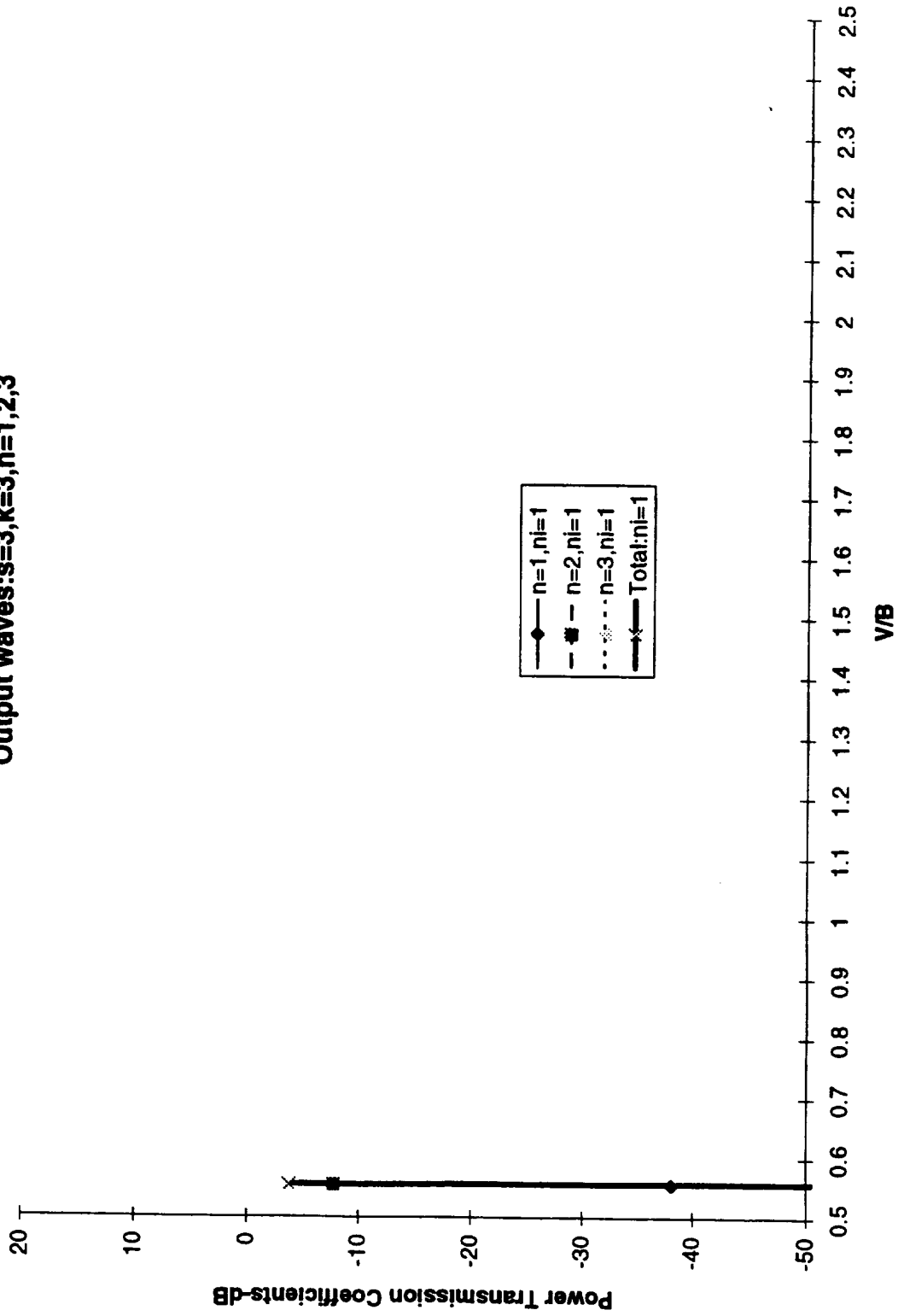
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=1, k_l=3, n_l=1$

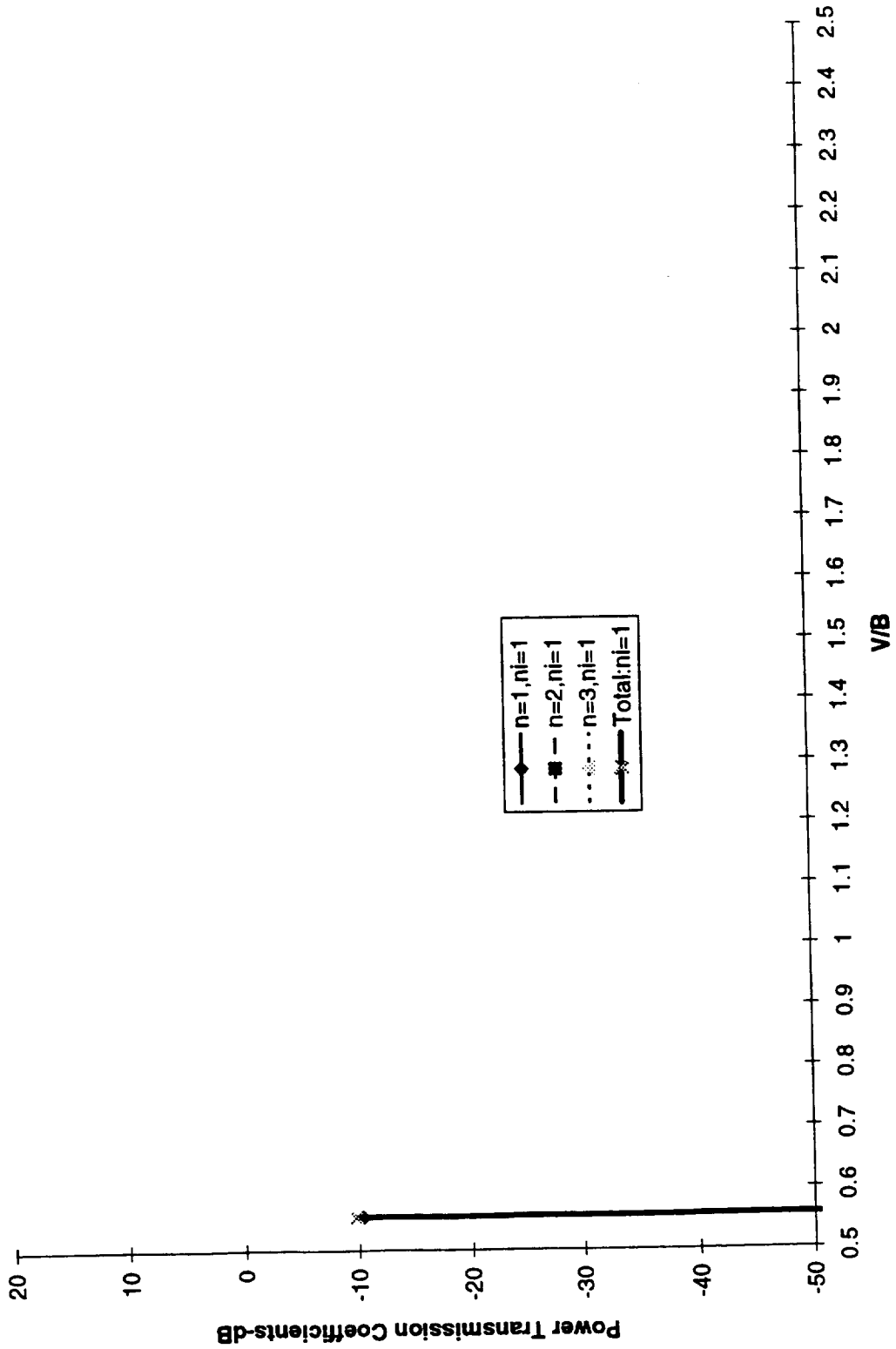
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

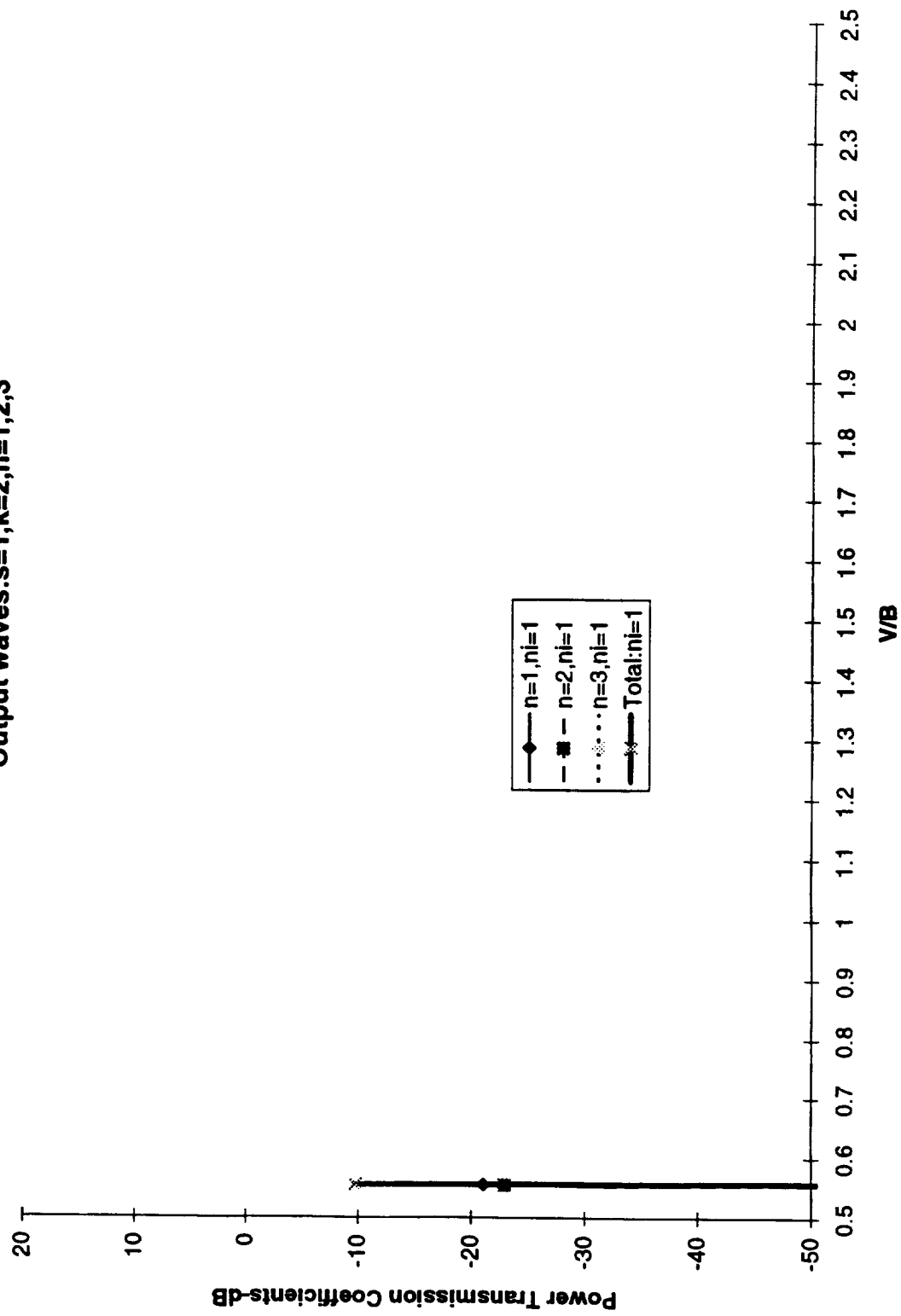
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

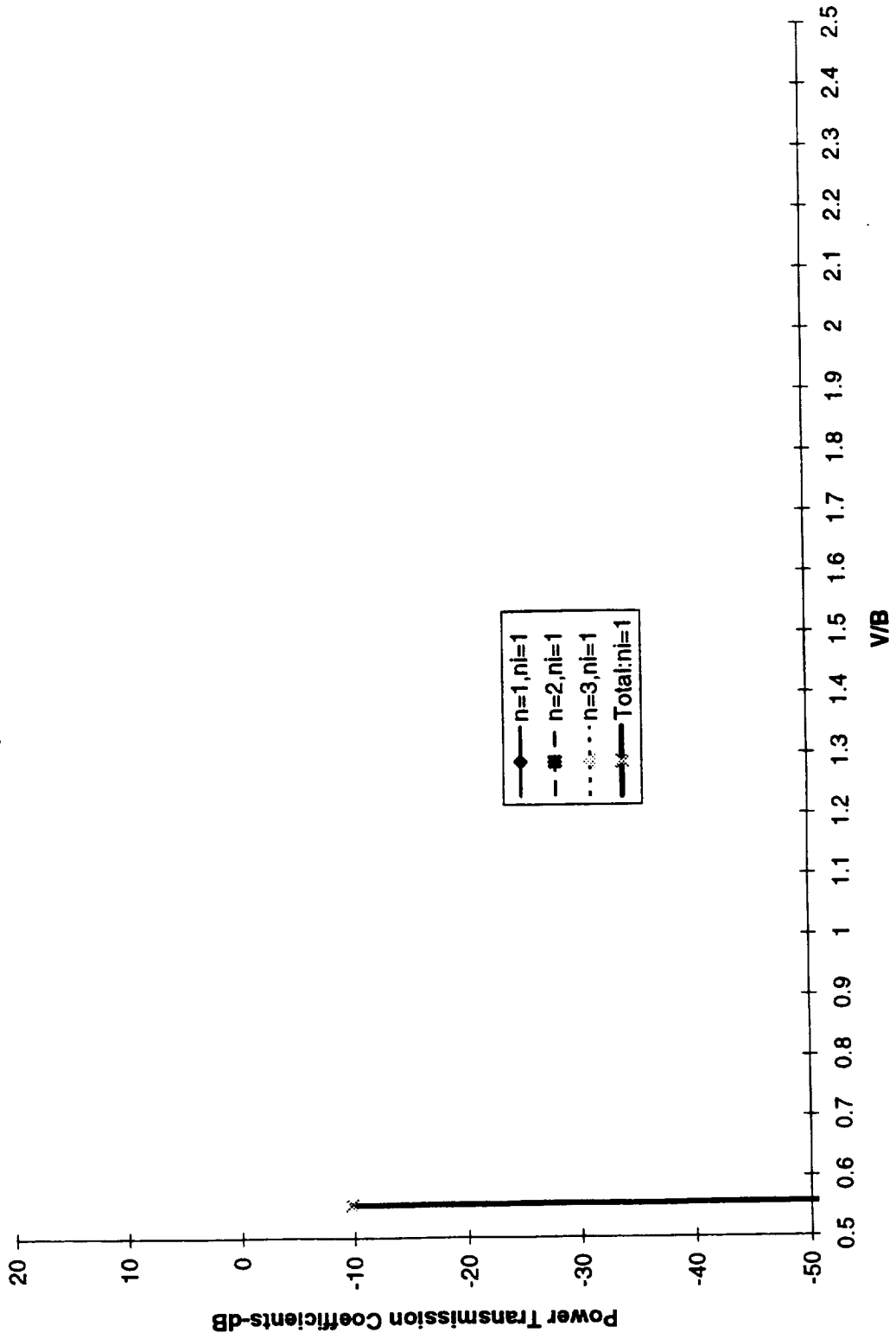
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=1$

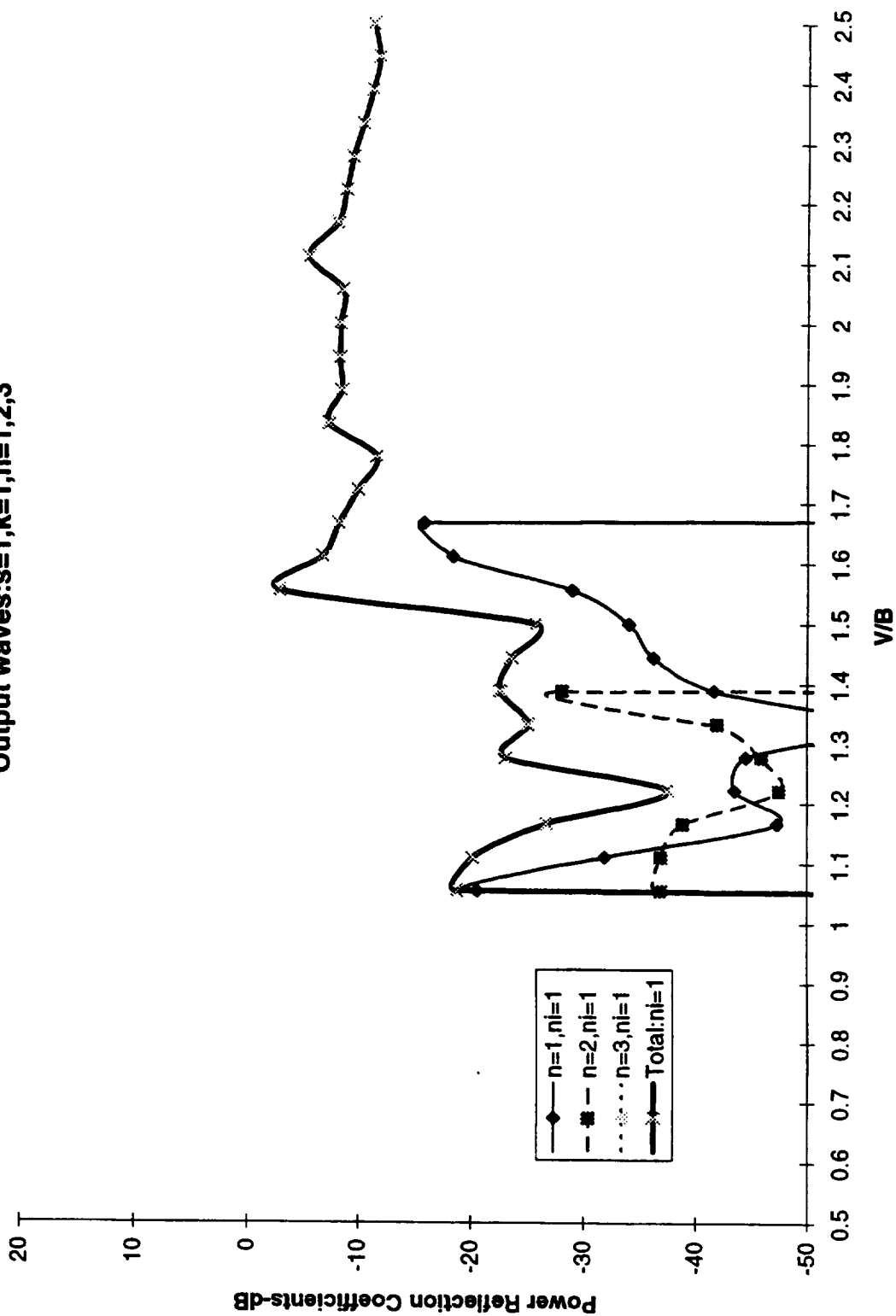
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

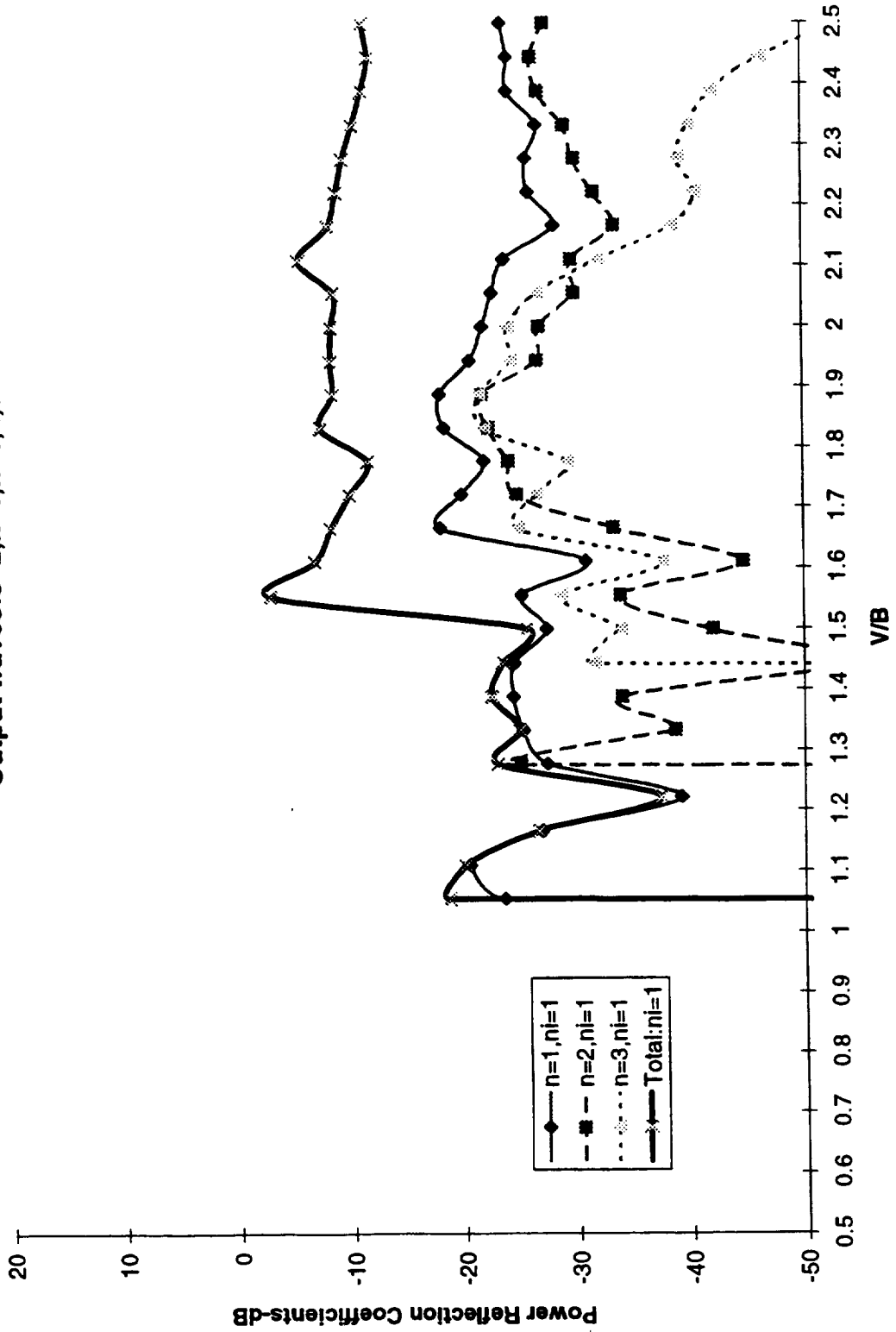
Output waves: $s=1, k=1, n=1, 2, 3$



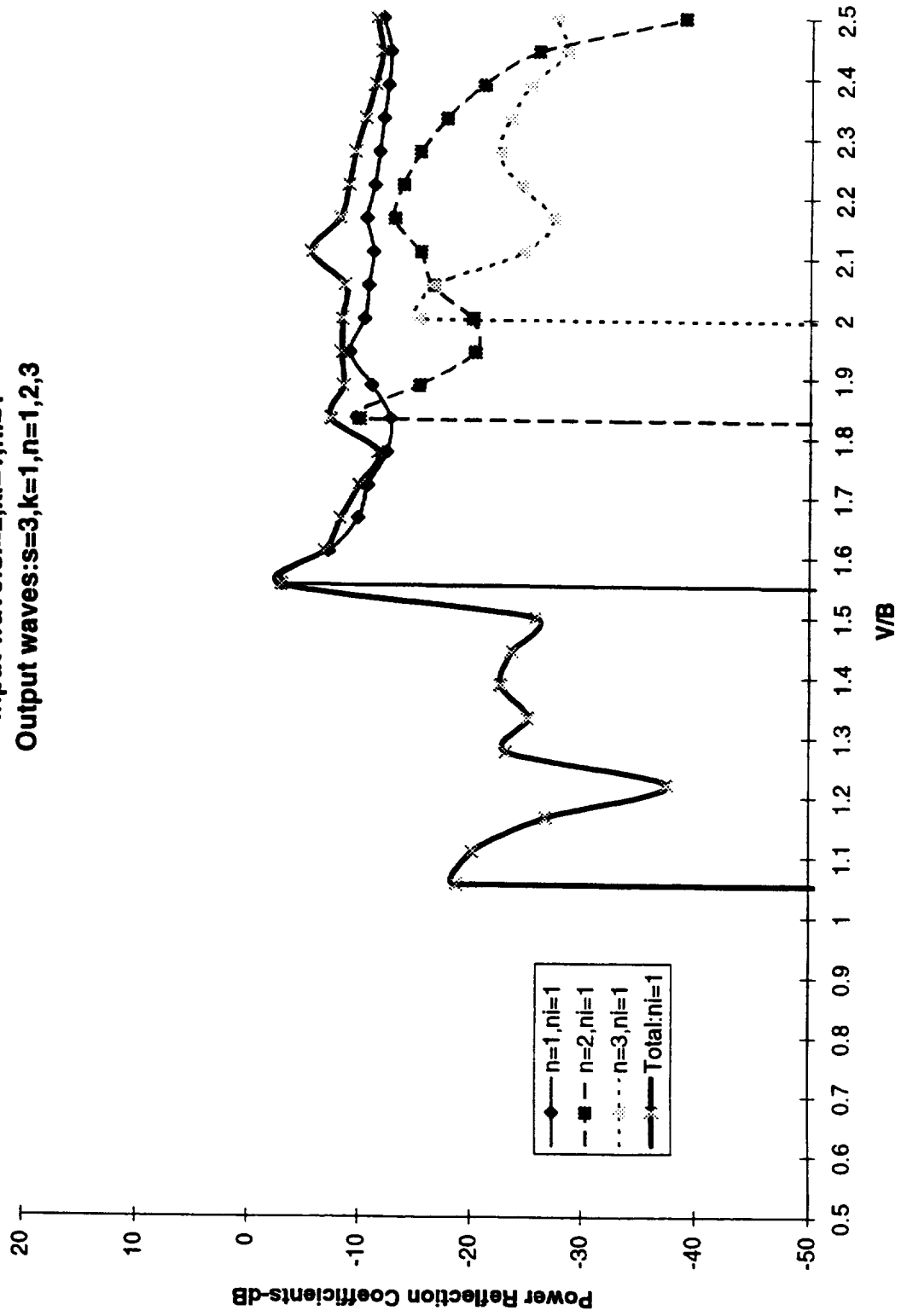
Rotor Reflection-Mid Speed Case

Input wave: $s_l=2, k_l=1, n_l=1$

Output waves: $s=2, k=1, n=1, 2, 3$



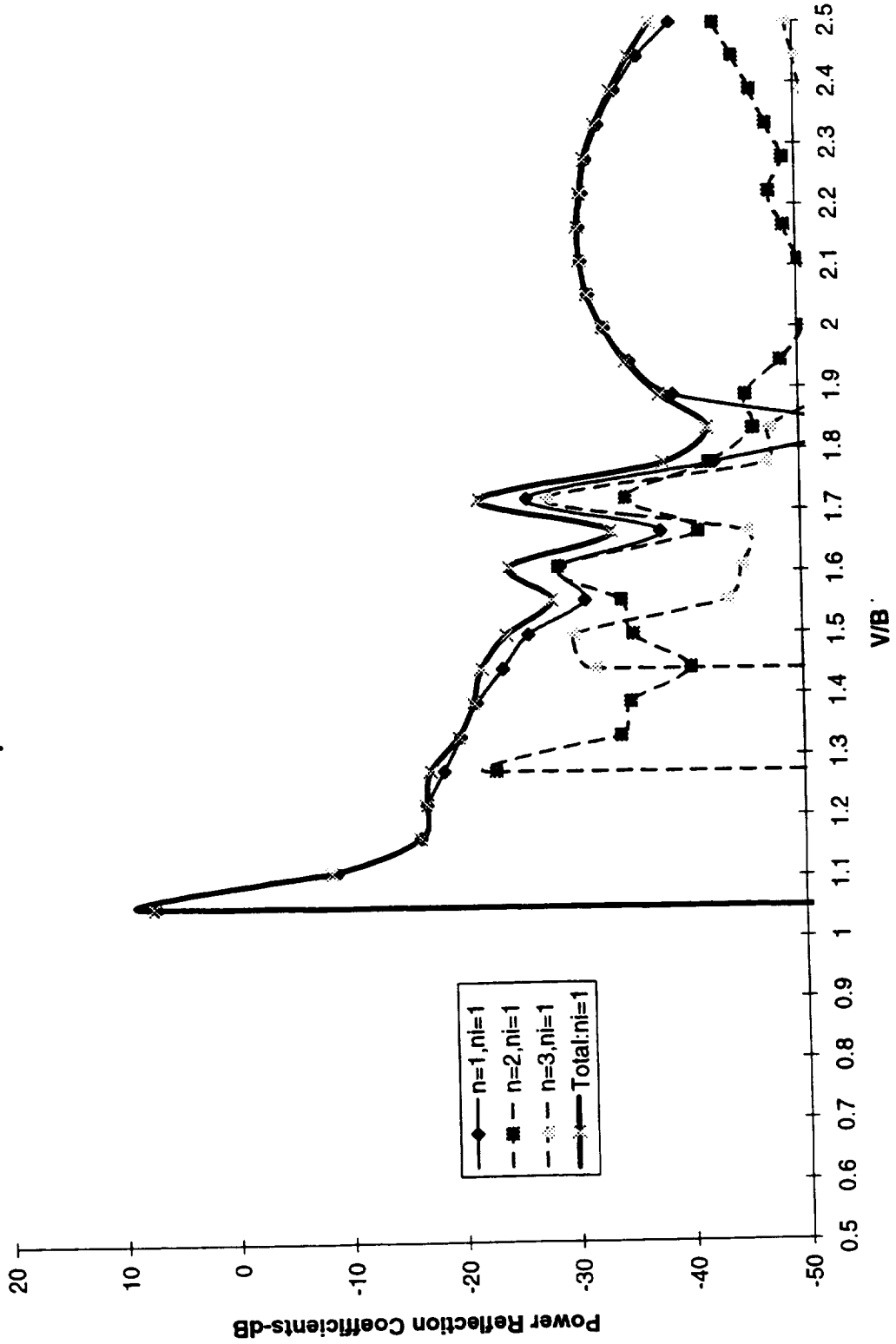
Rotor Reflection-Mid Speed Case
Input wave: $s_i=2, k_i=1, n_i=1$
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

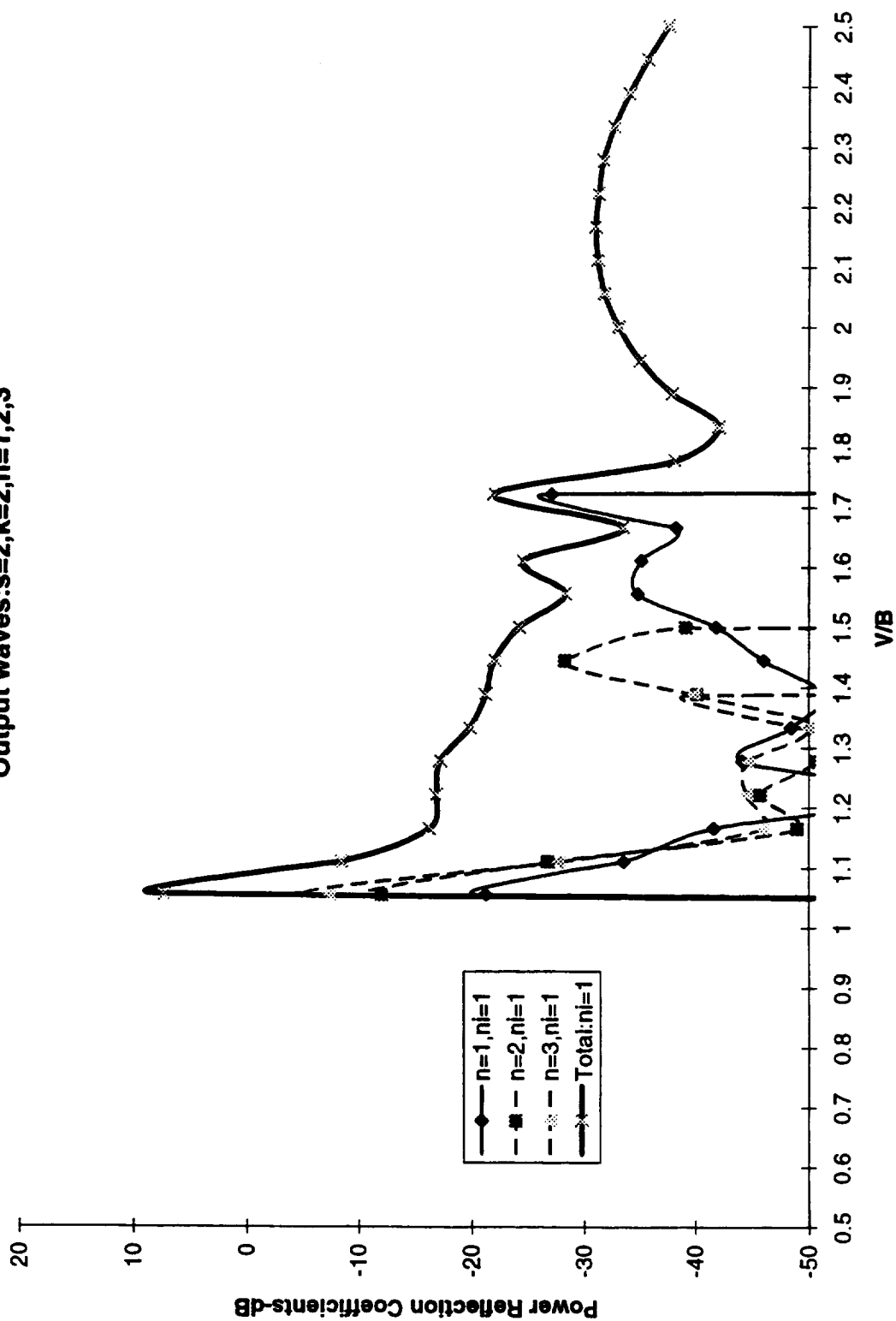
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

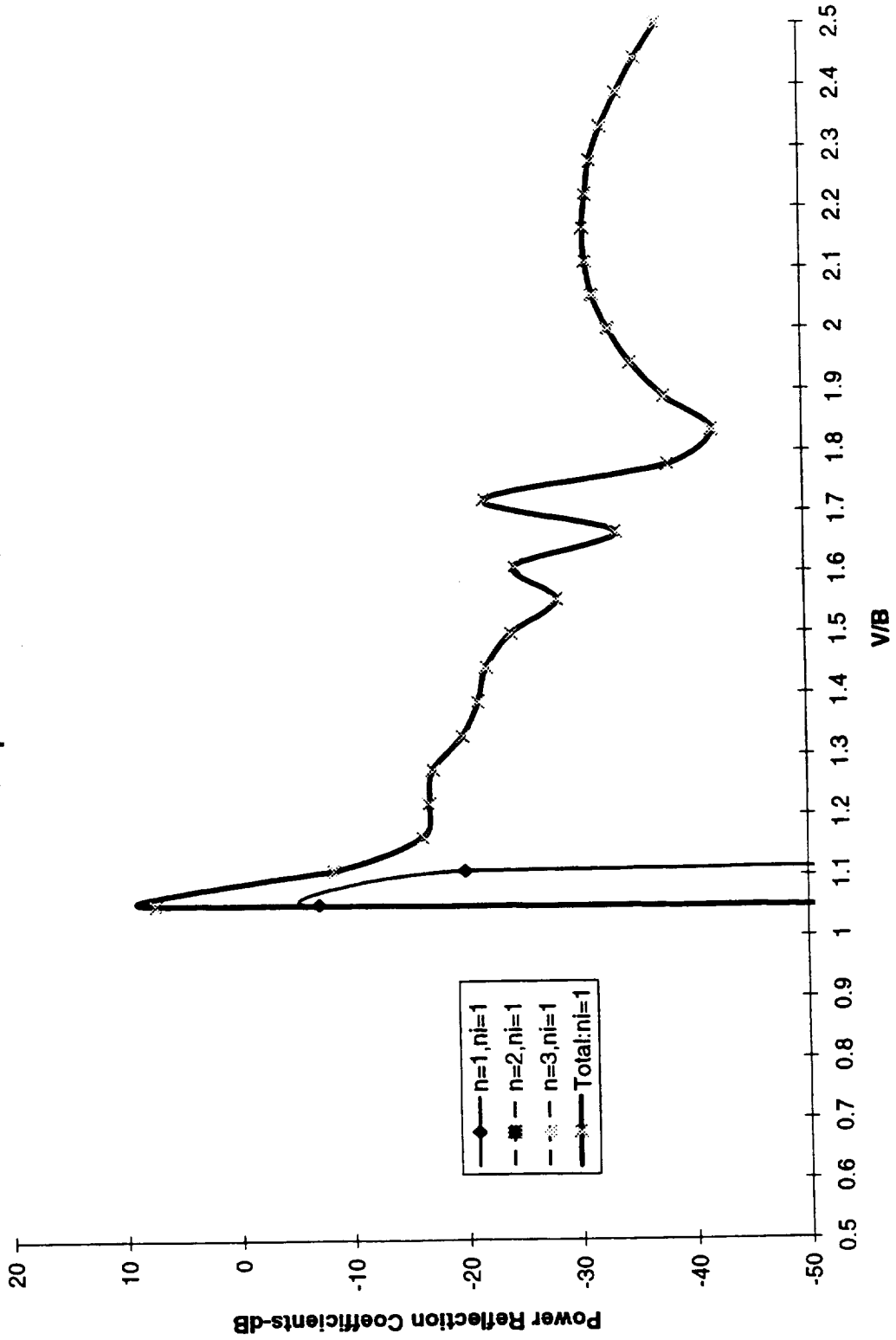
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

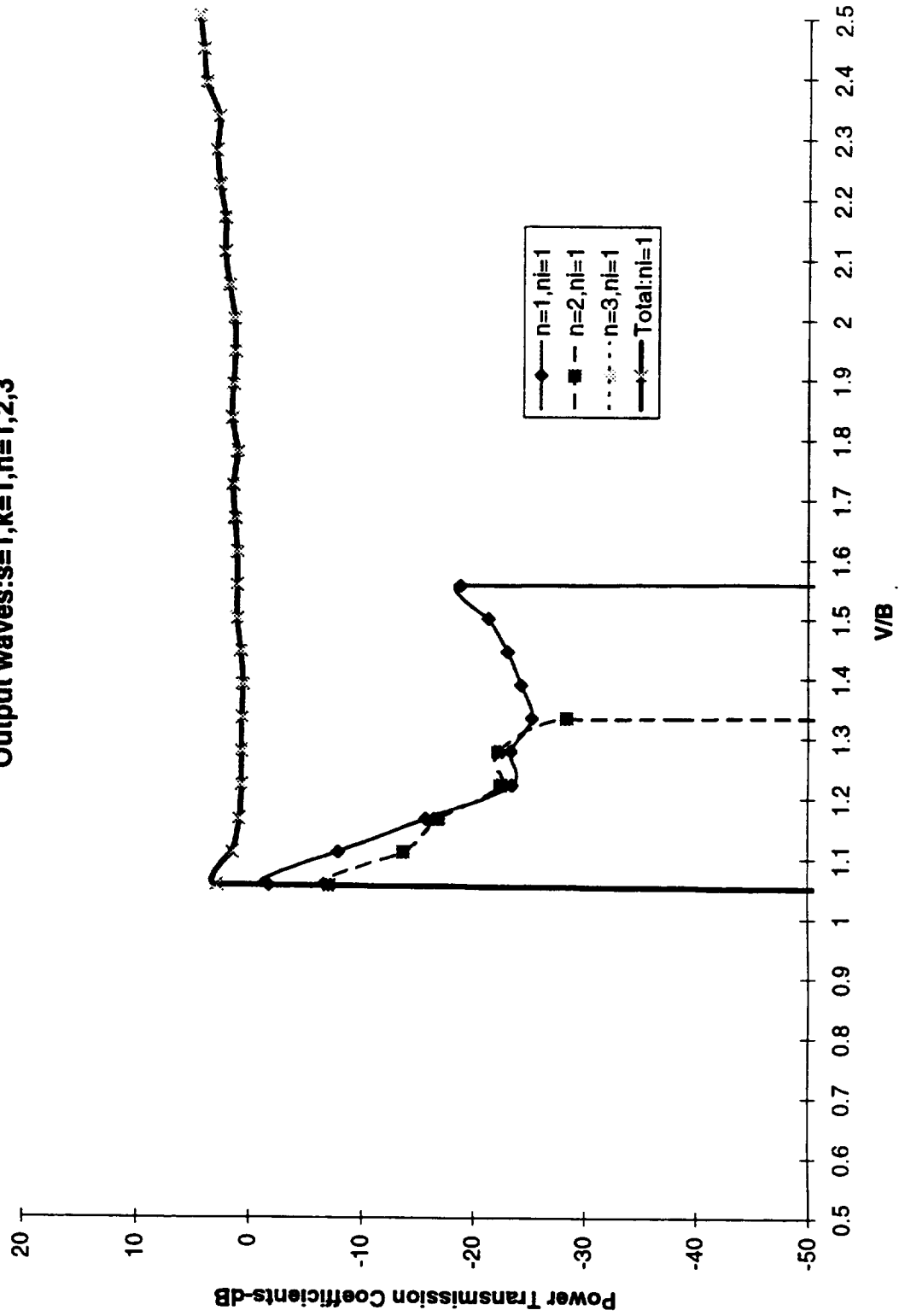
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=2, k_l=1, n_l=1$

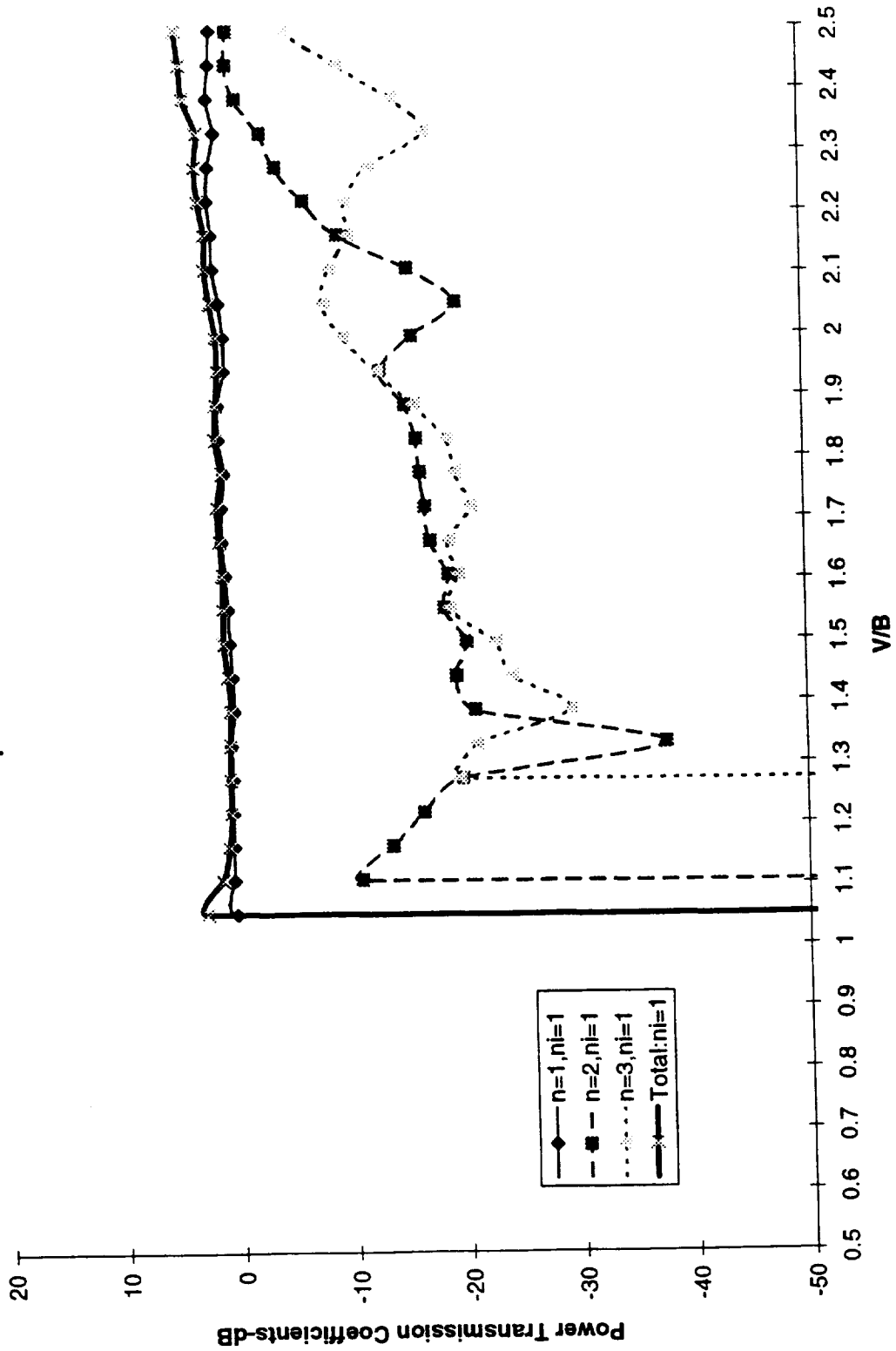
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

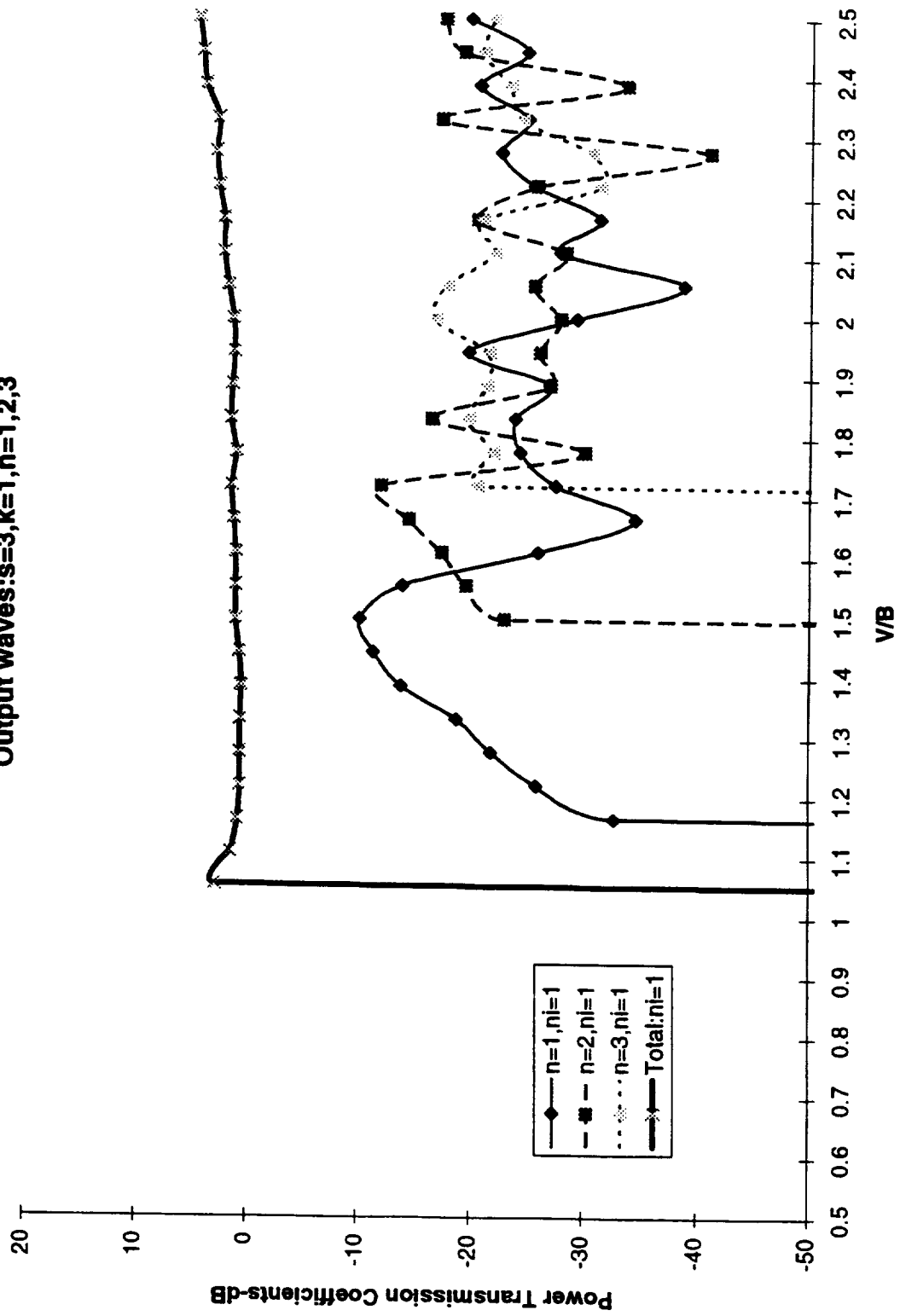
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

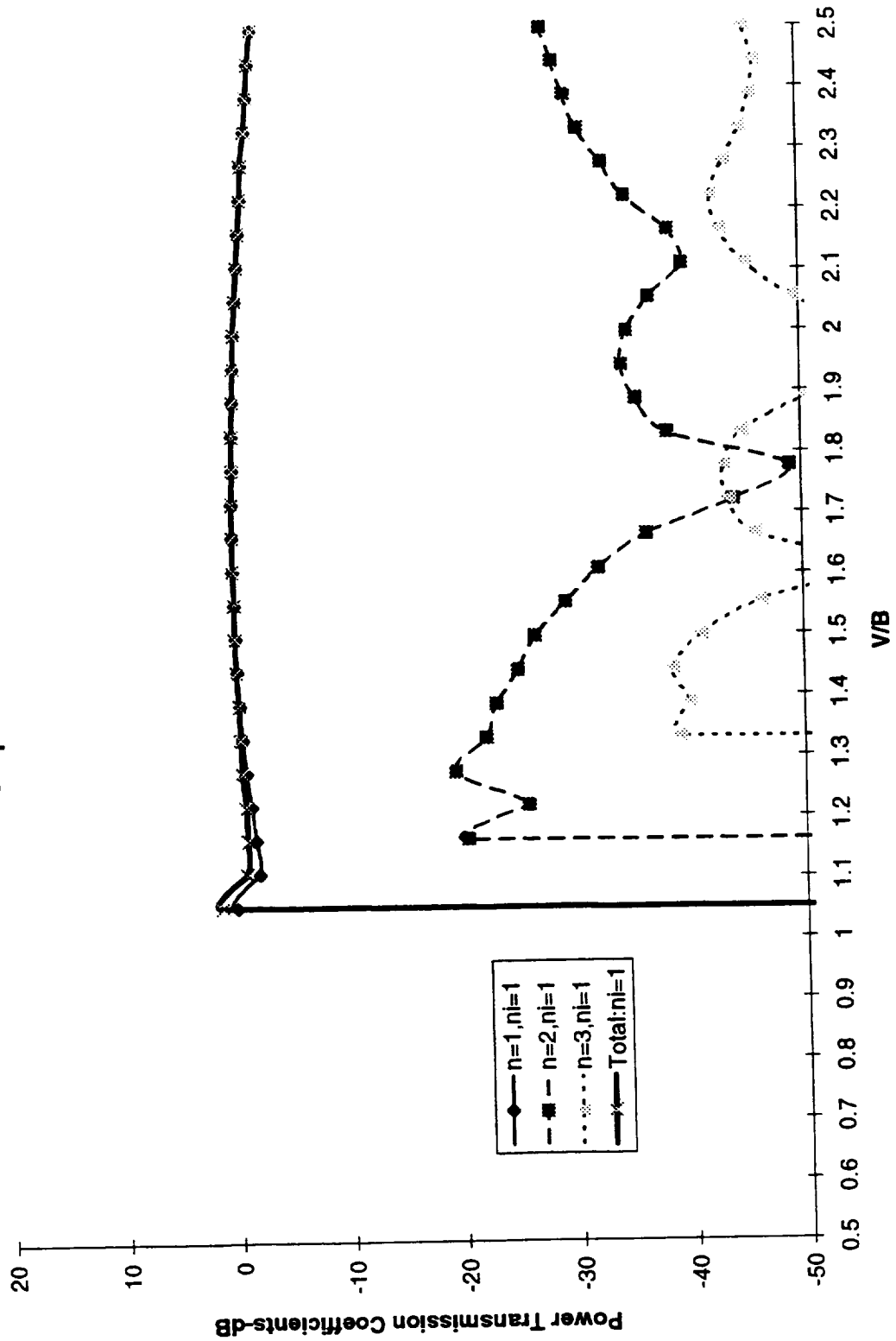
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

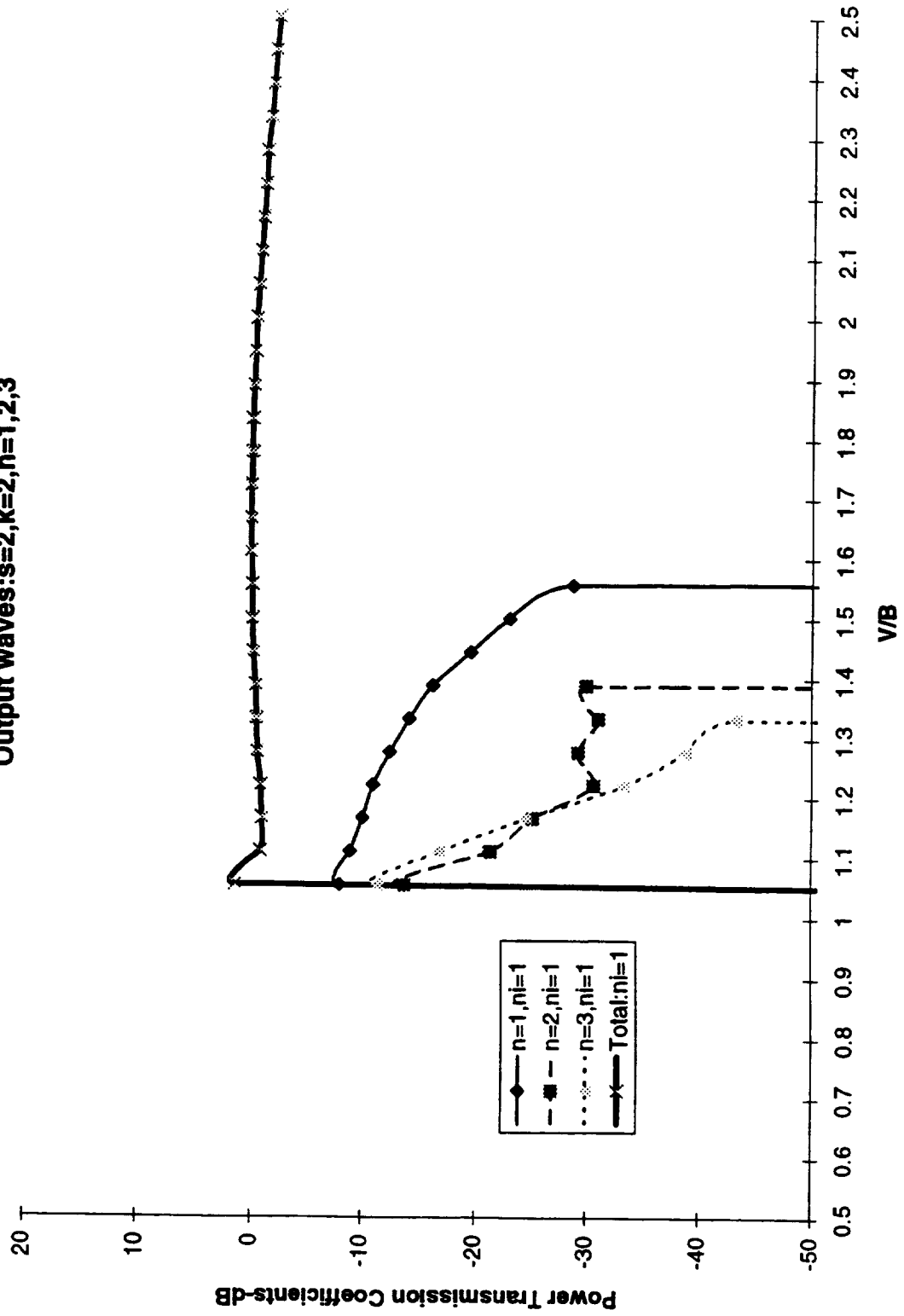
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

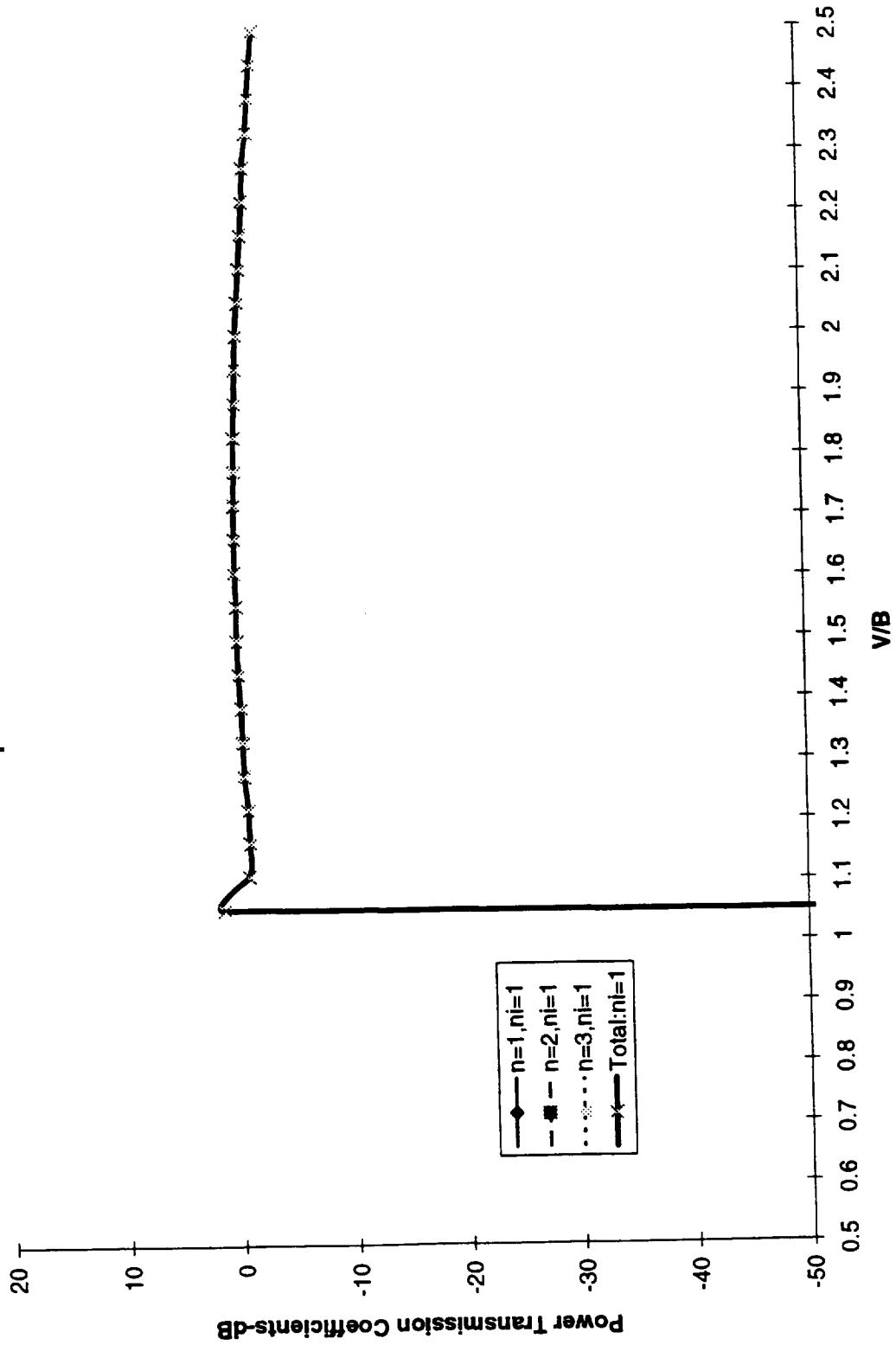
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=1$

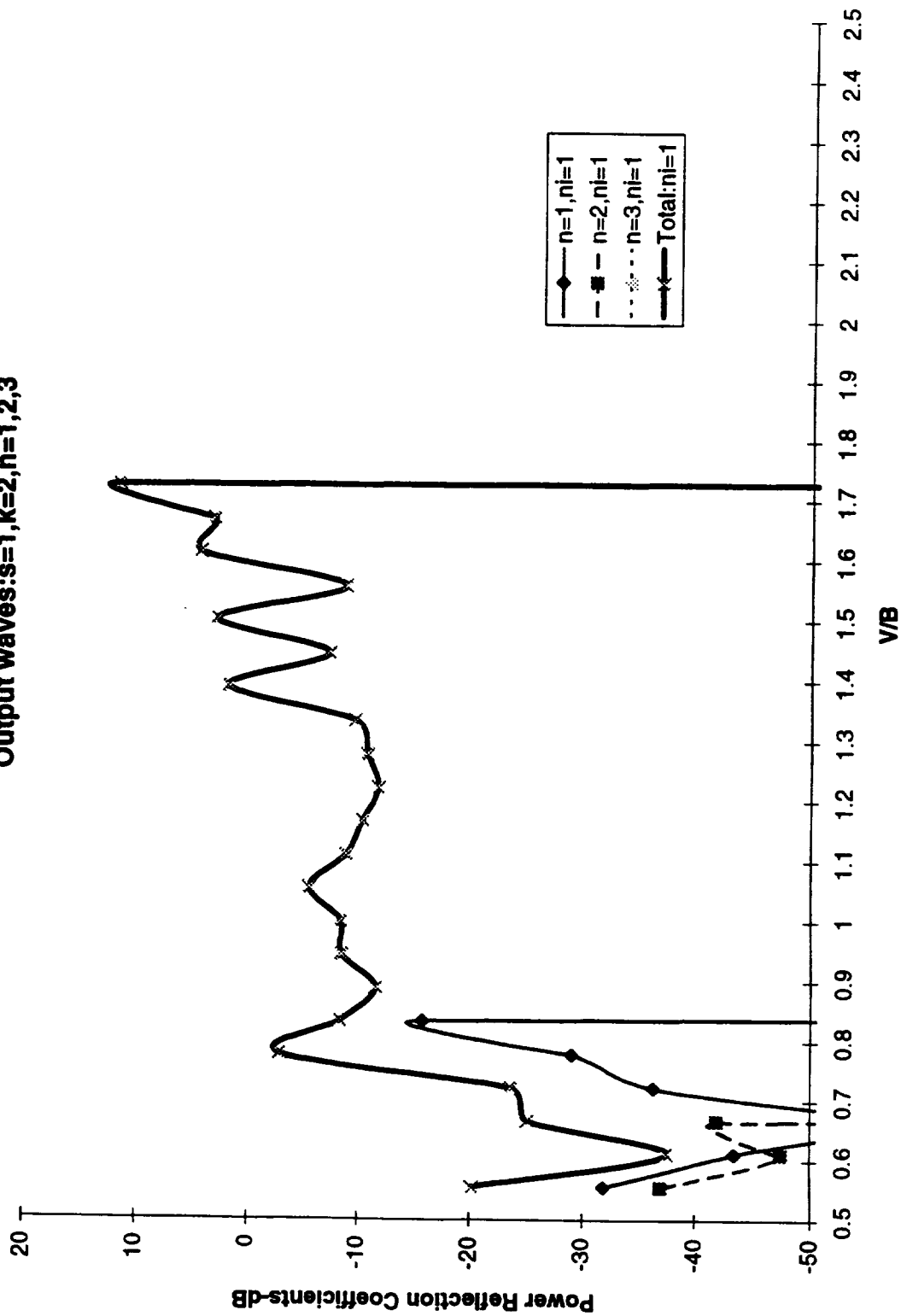
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

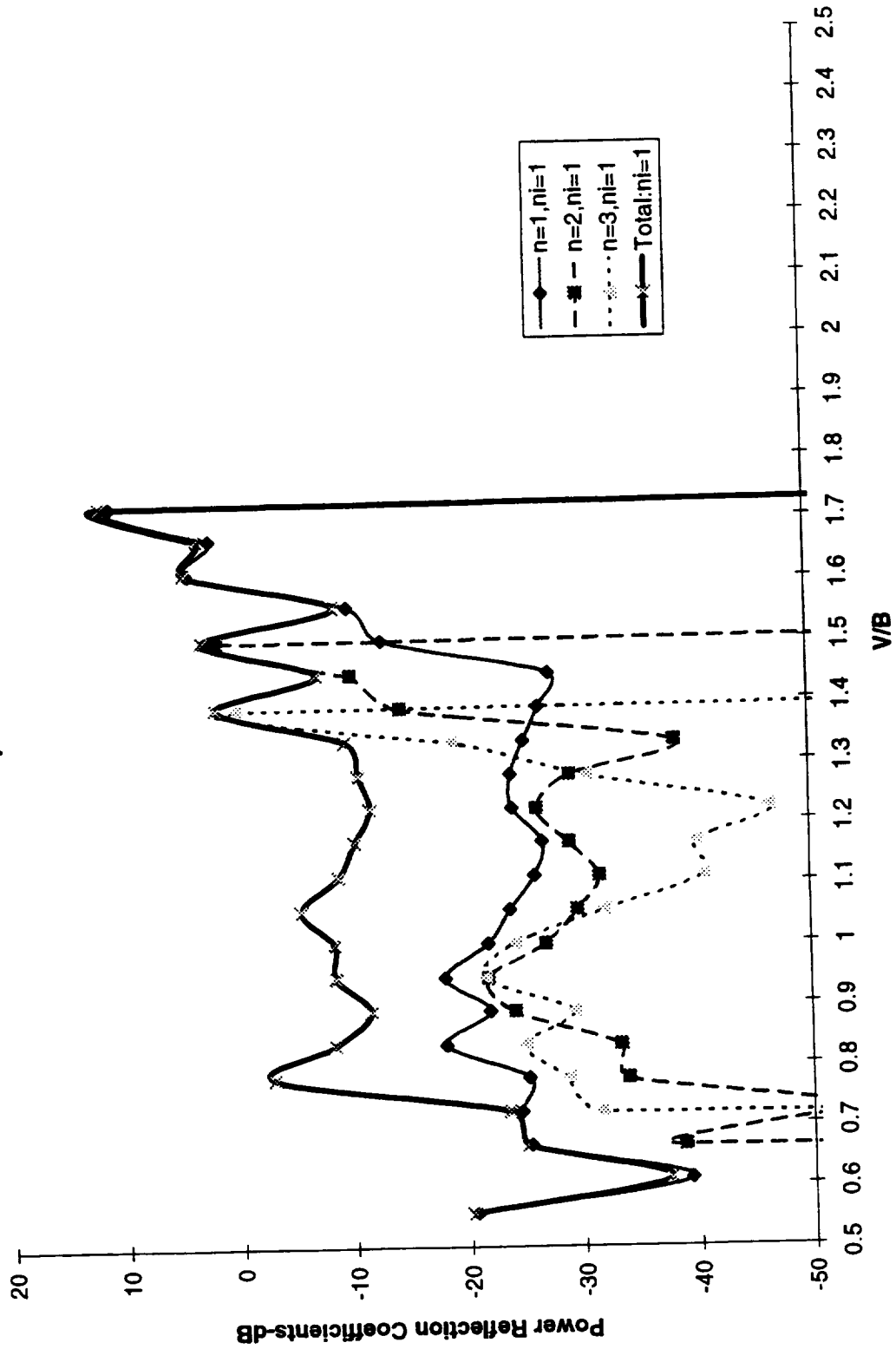
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

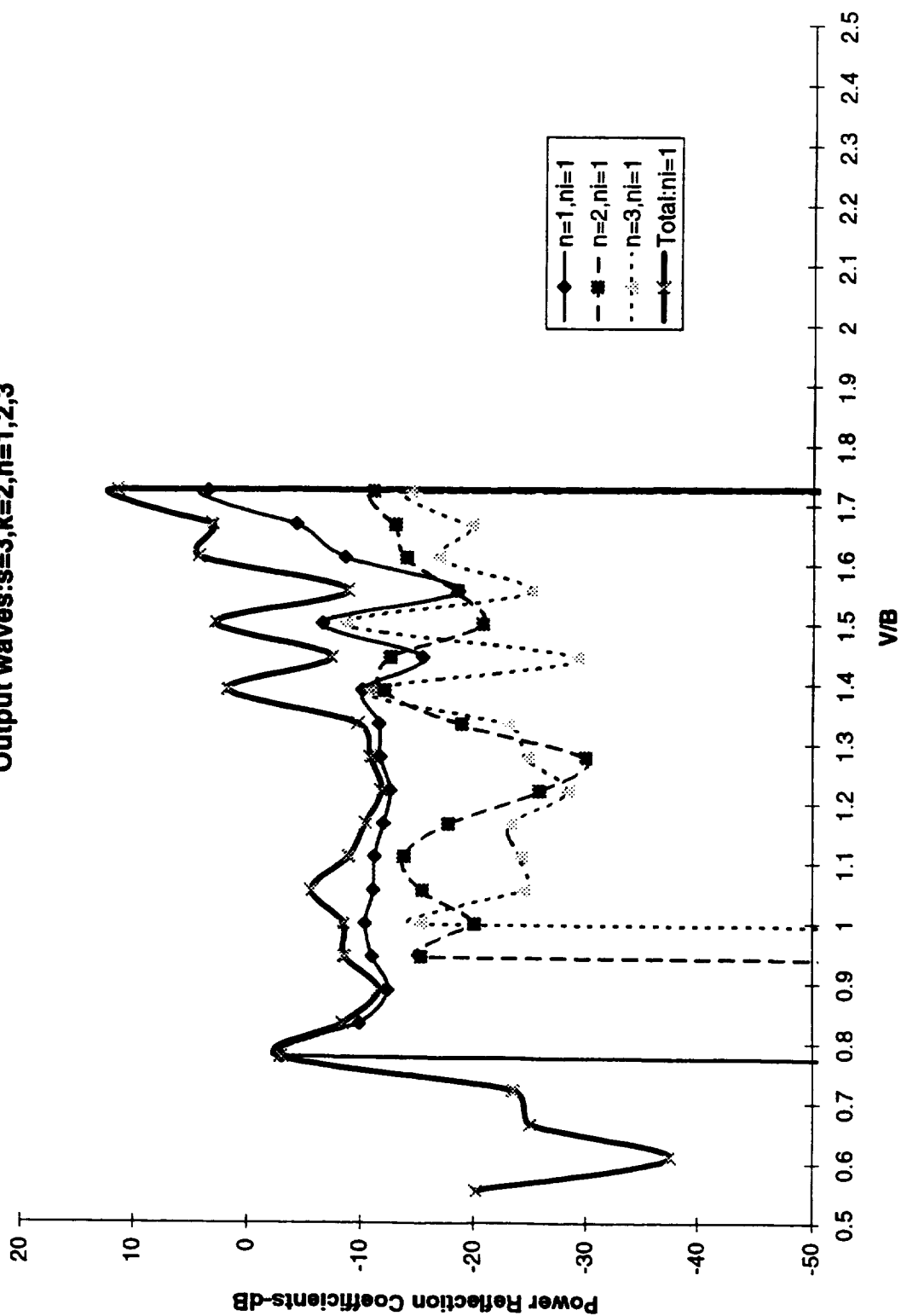
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

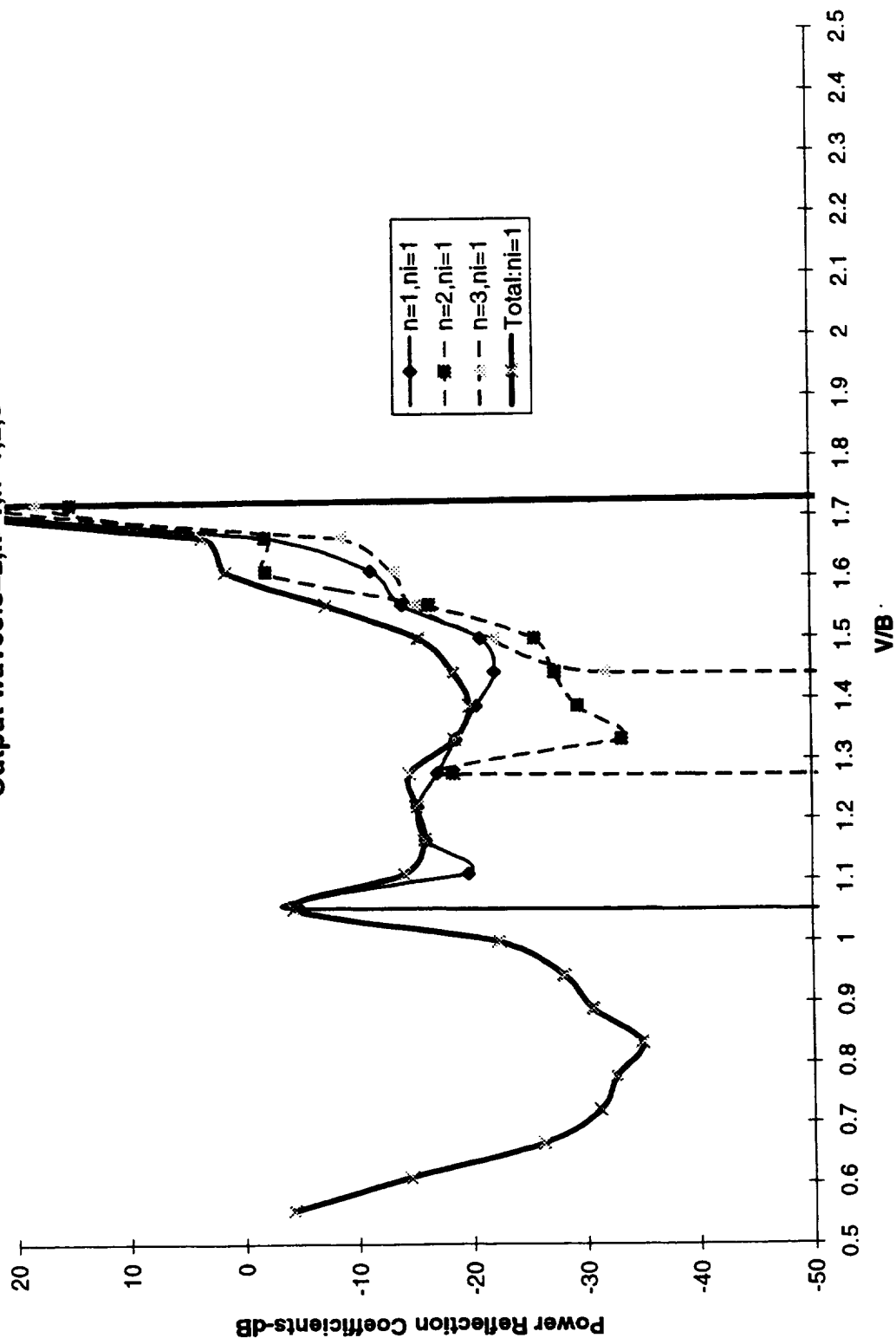
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

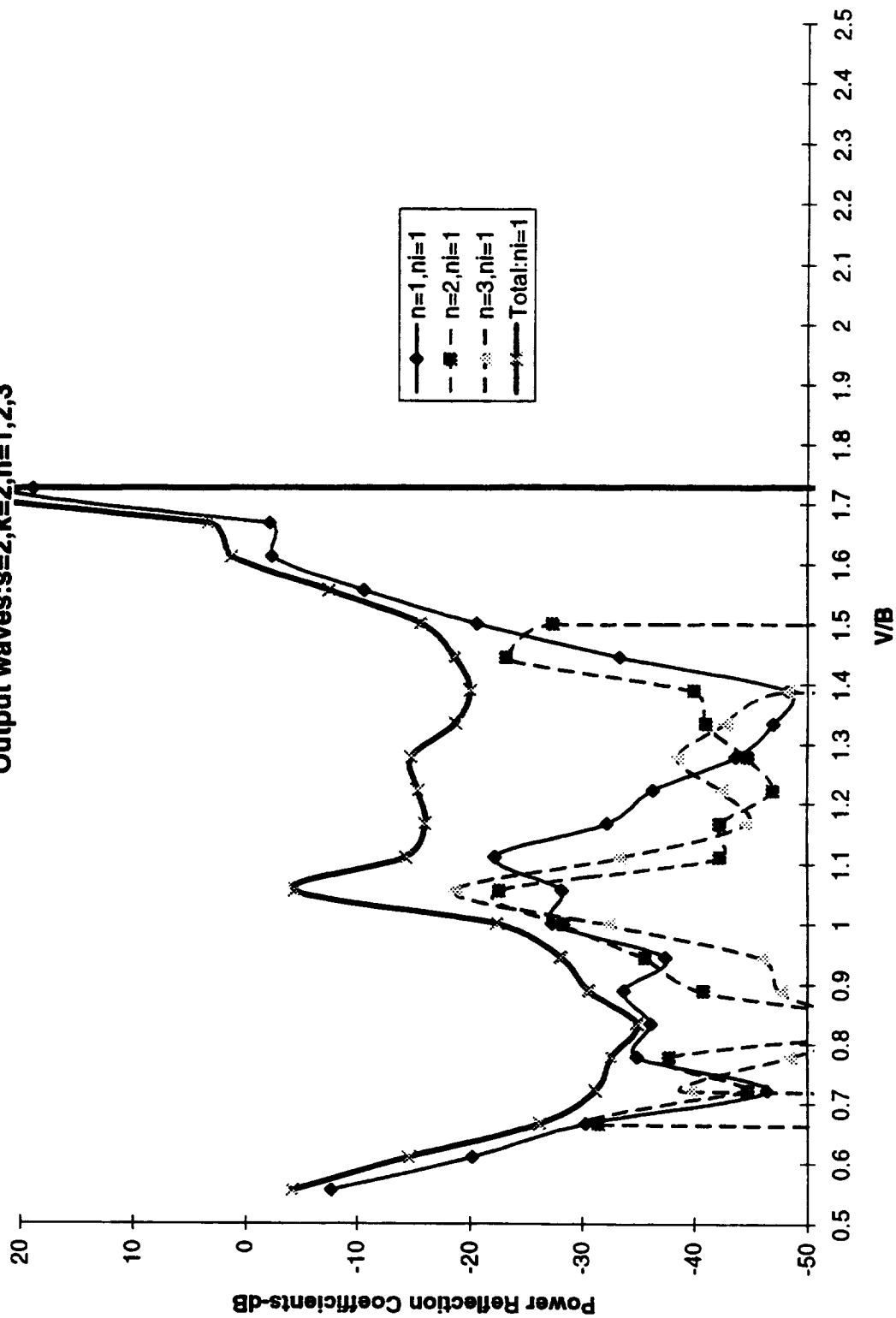
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

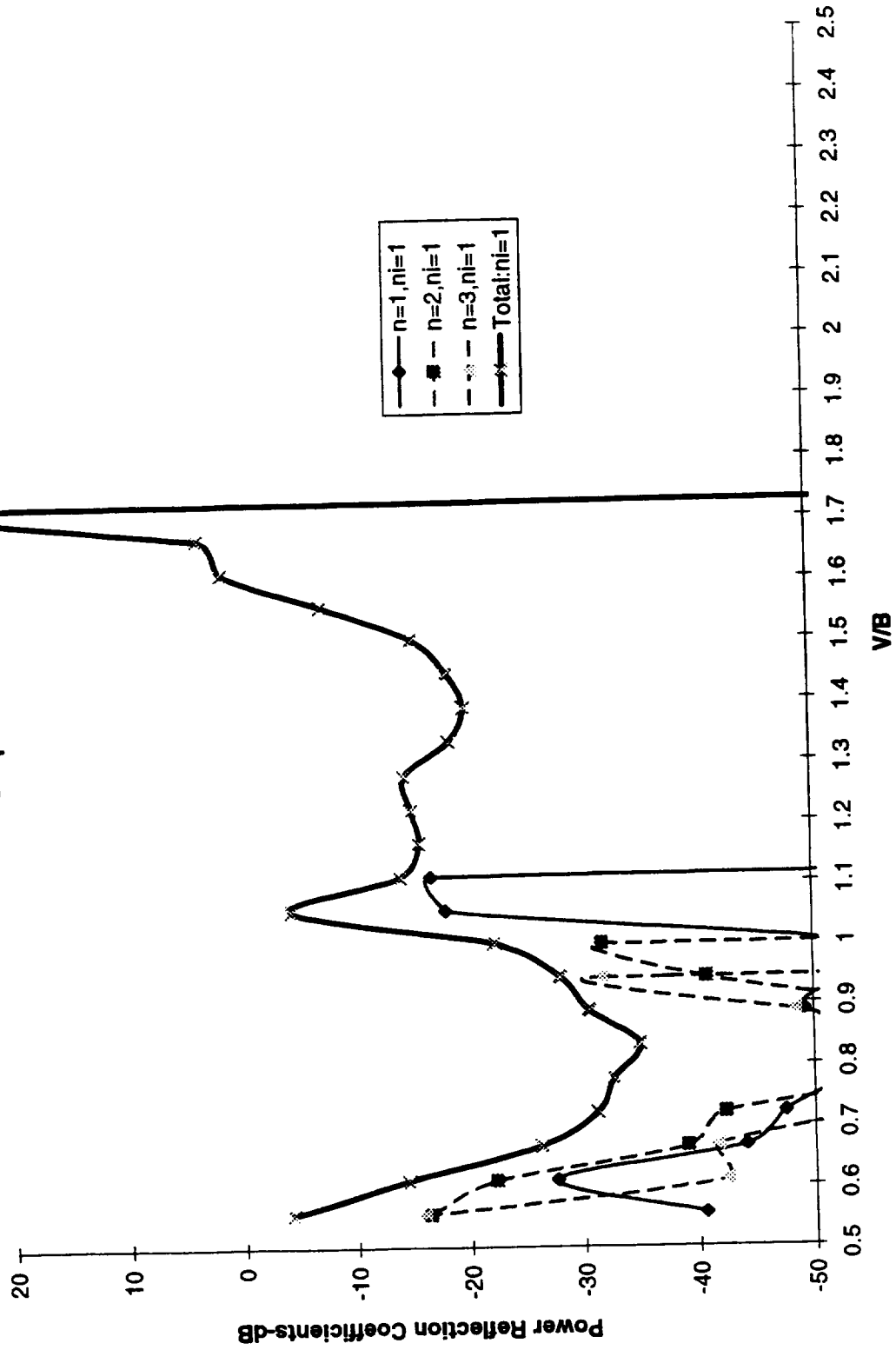
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

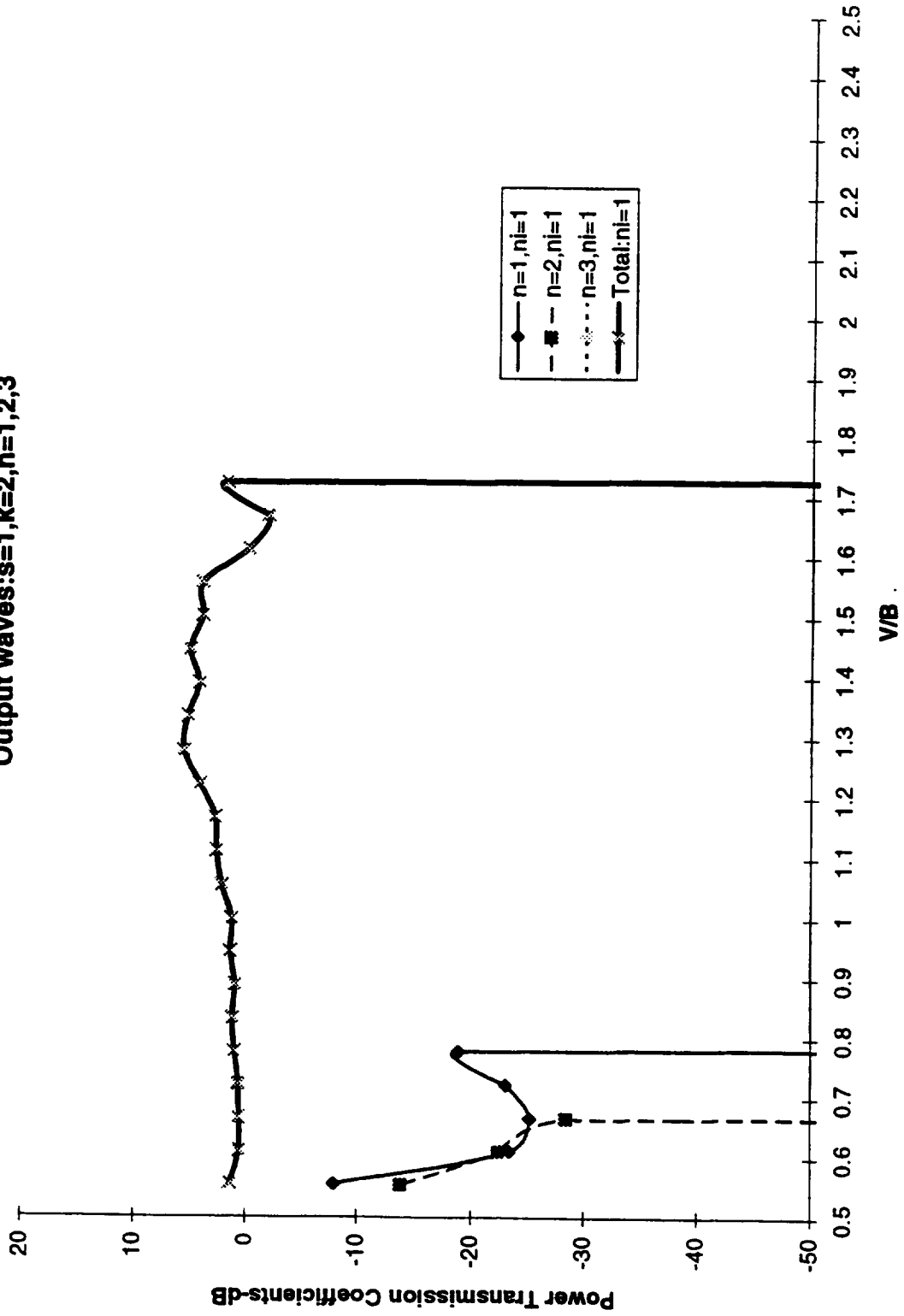
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mld Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

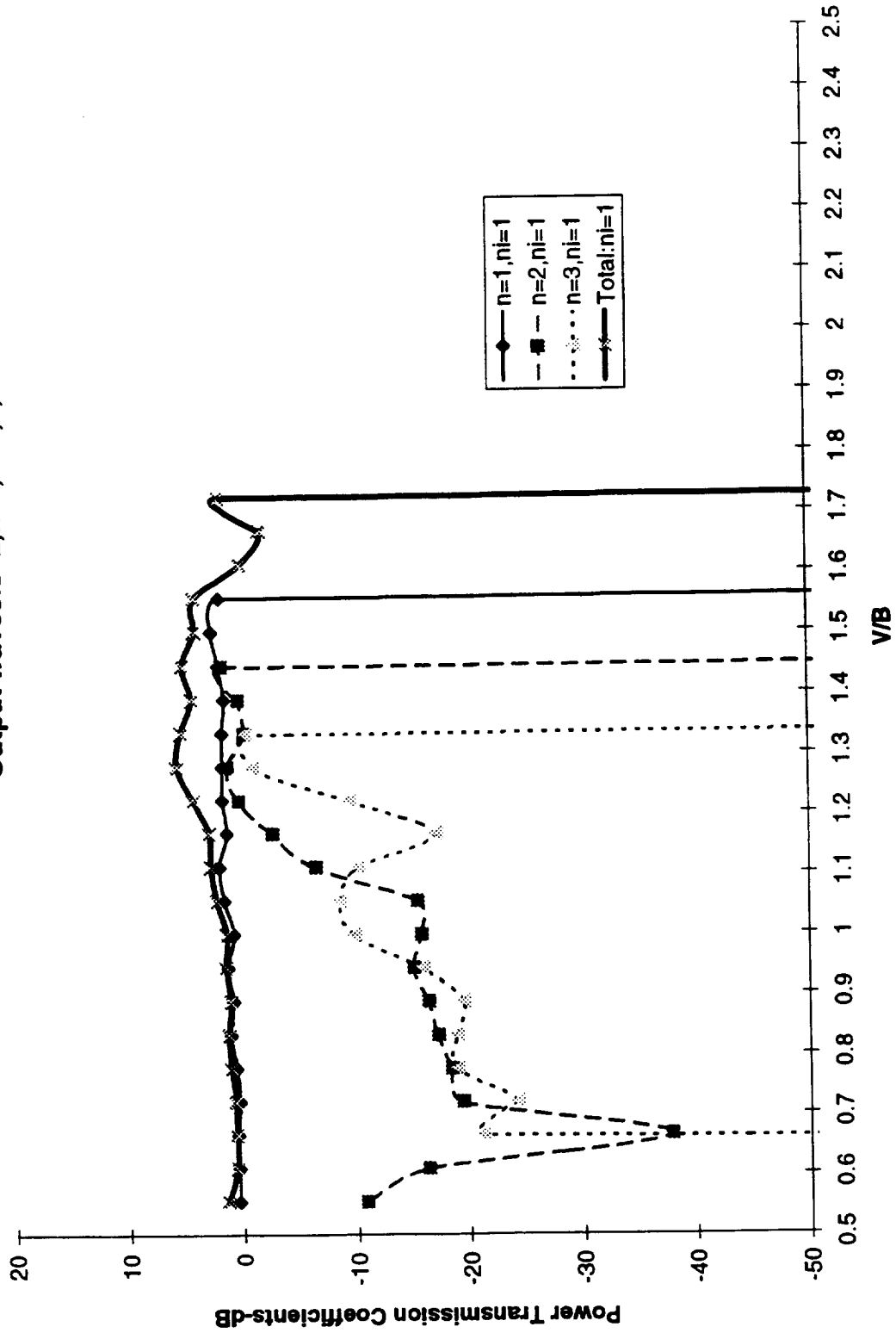
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=2, k_l=2, n_l=1$

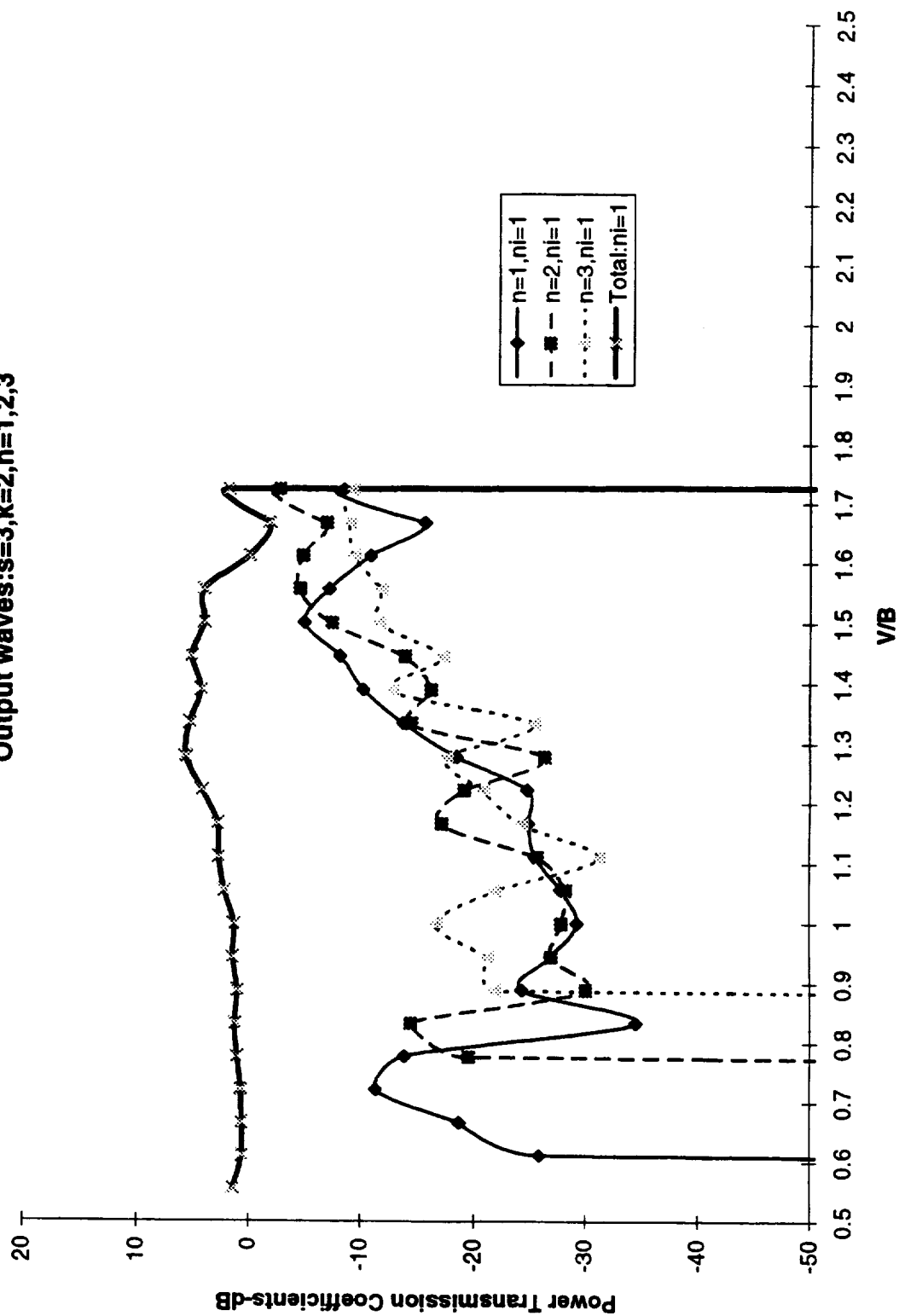
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

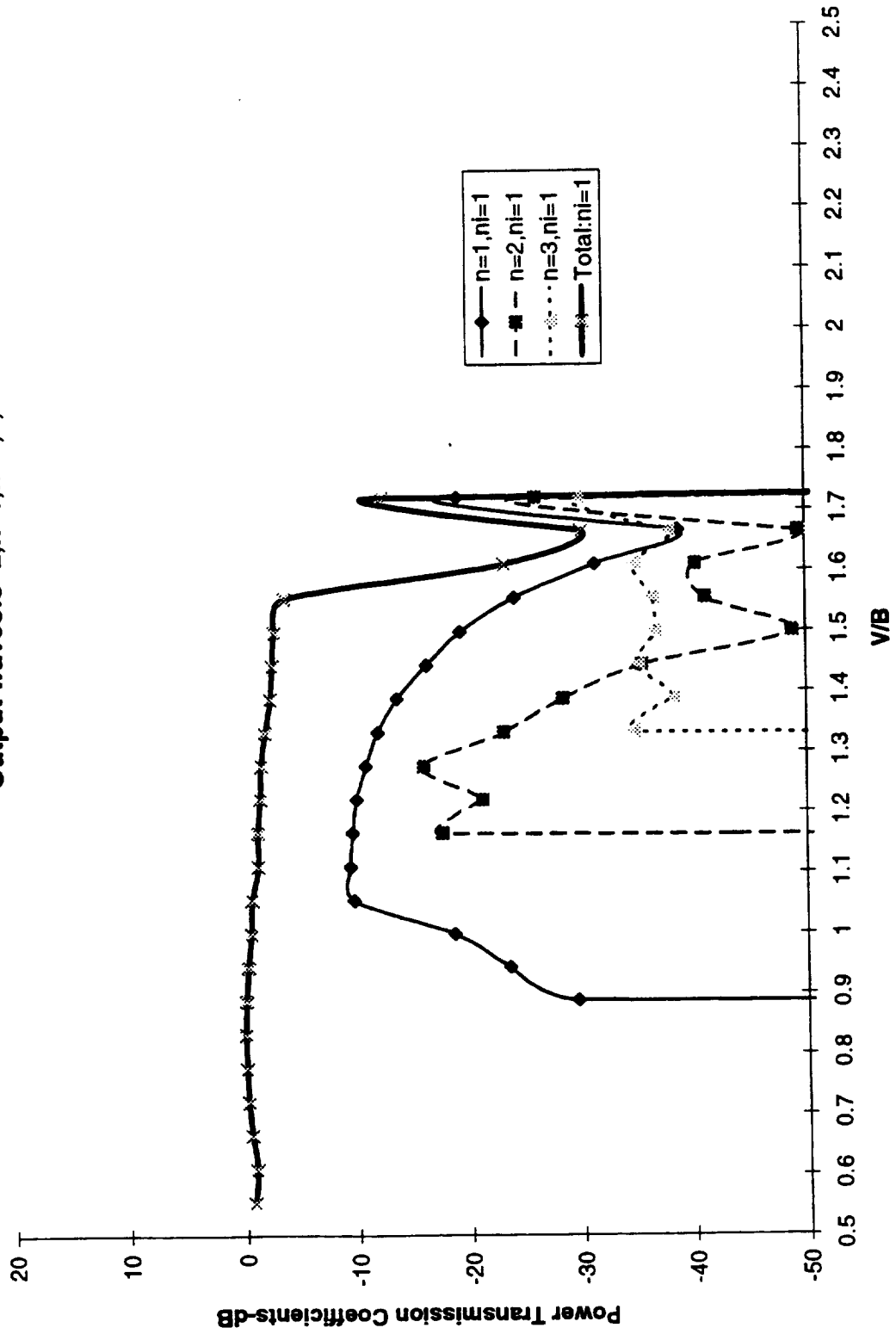
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

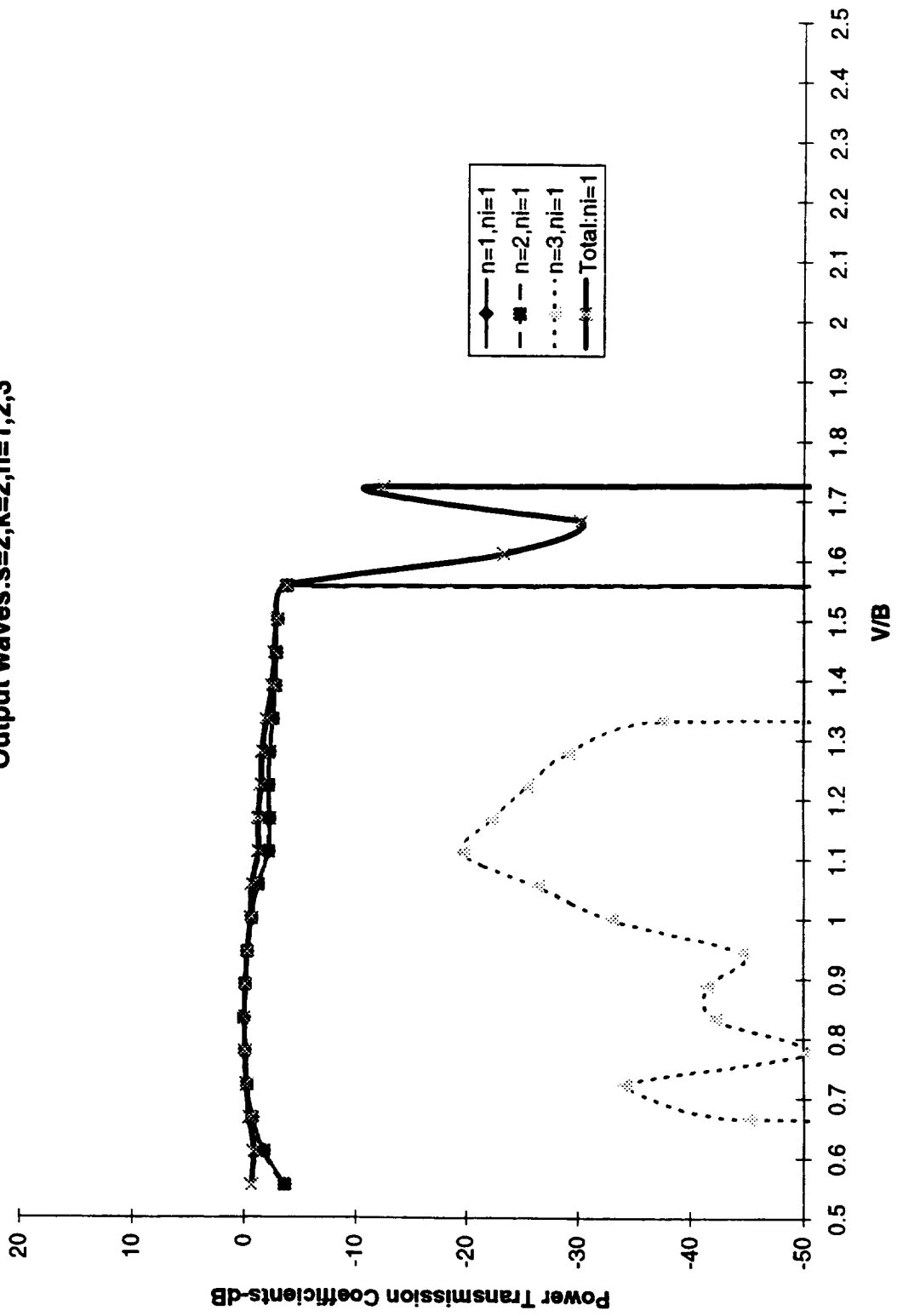
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_l=2, k_l=2, n_l=1$

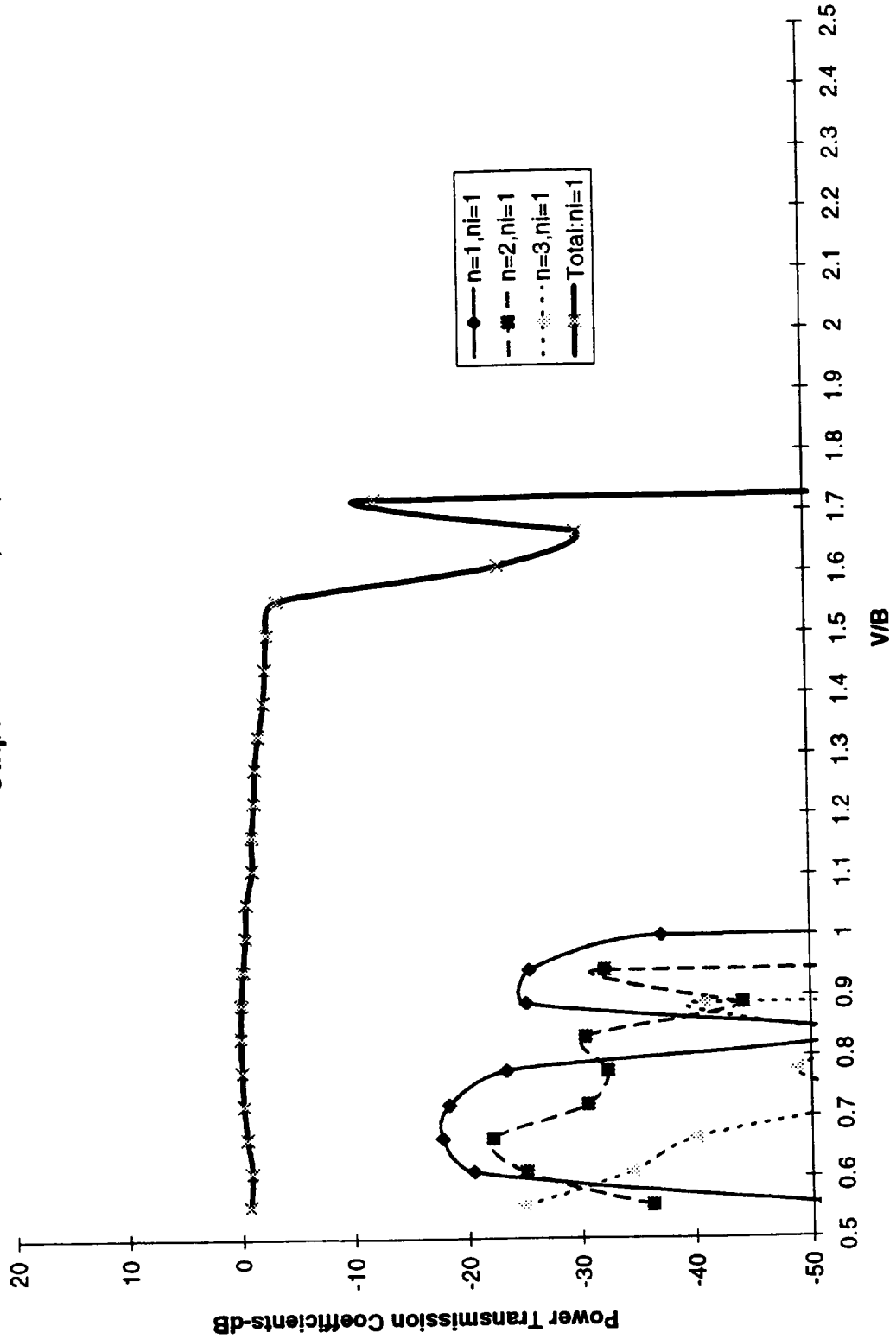
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=1$

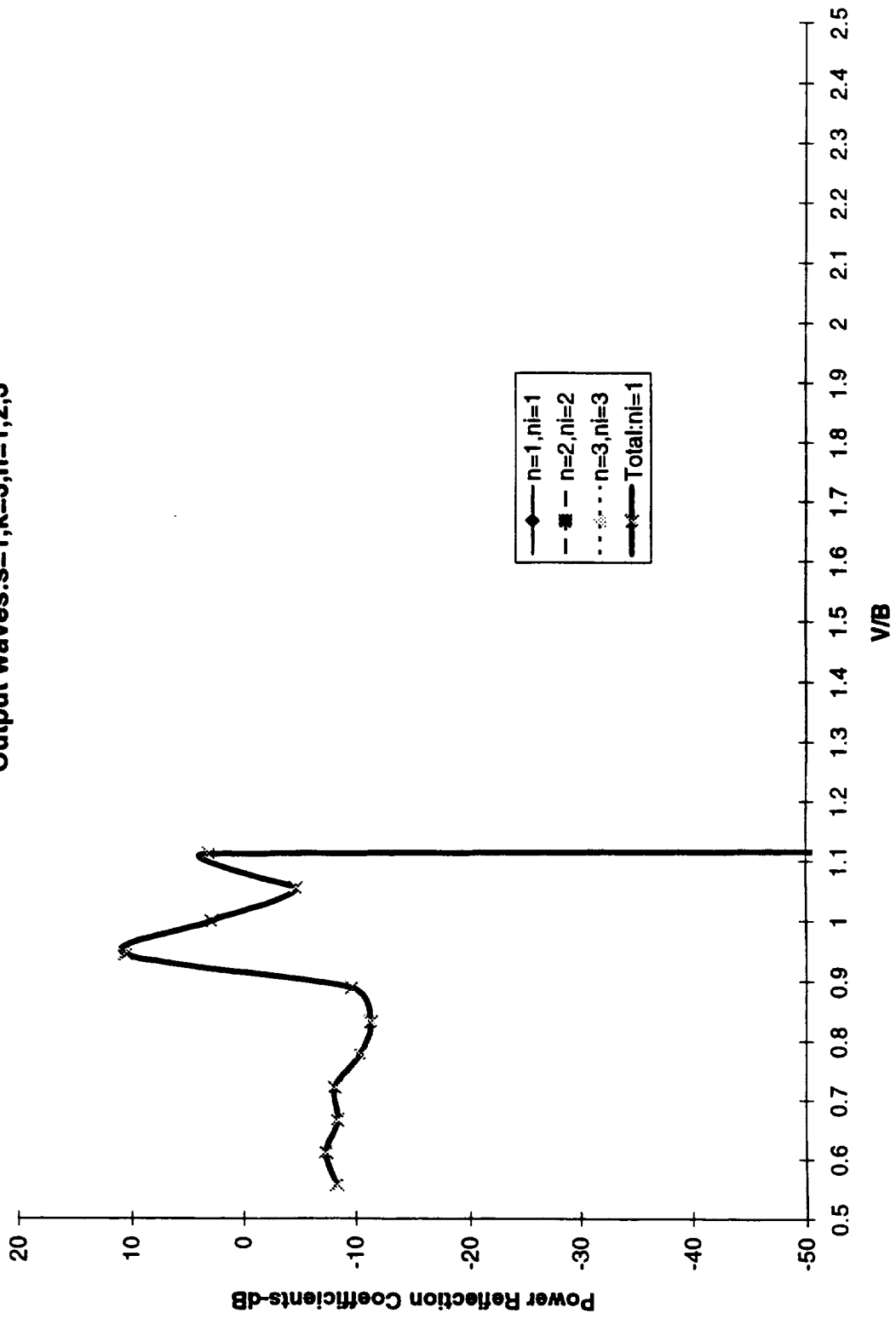
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=2, k_l=3, n_l=1$

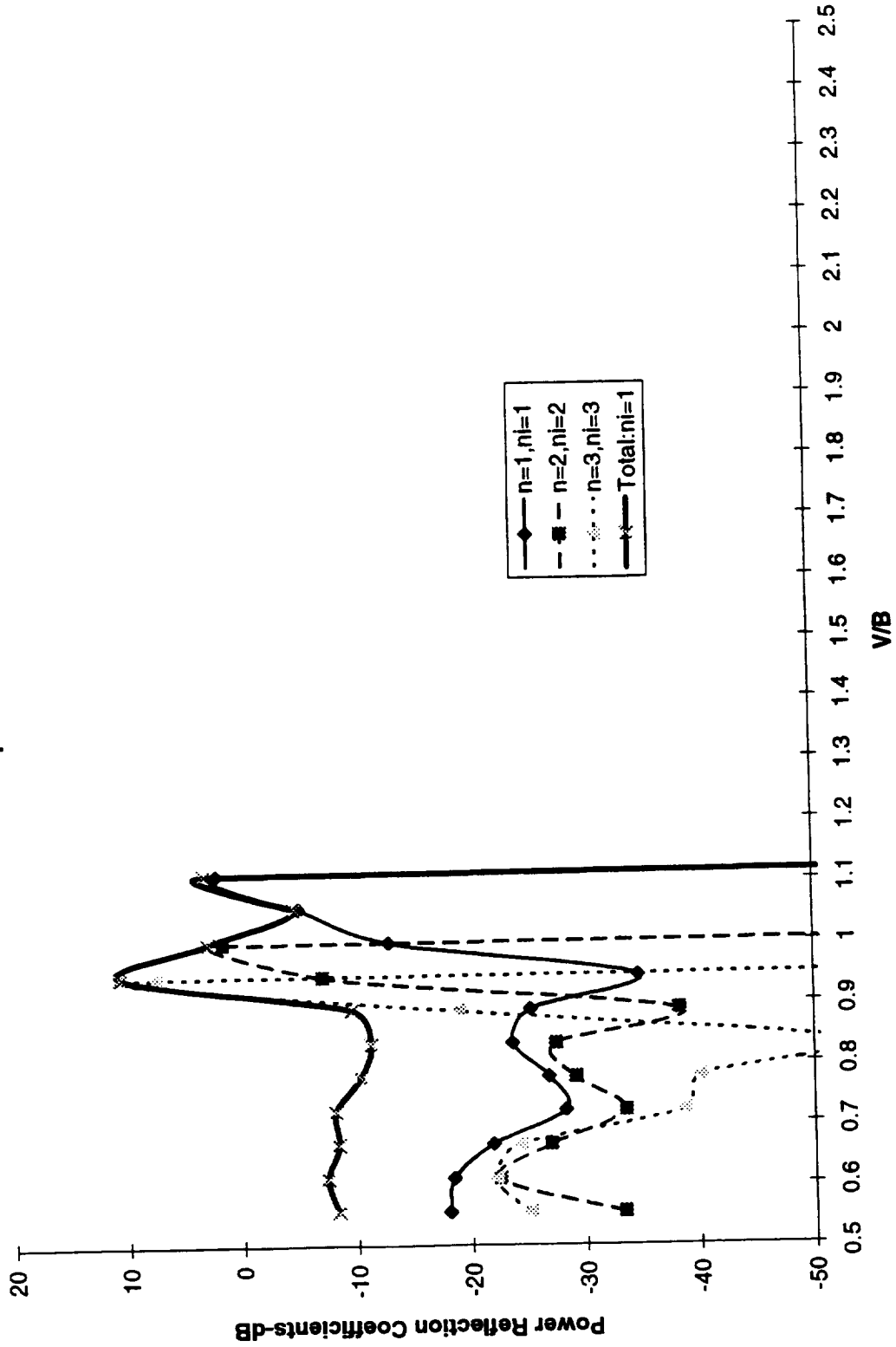
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

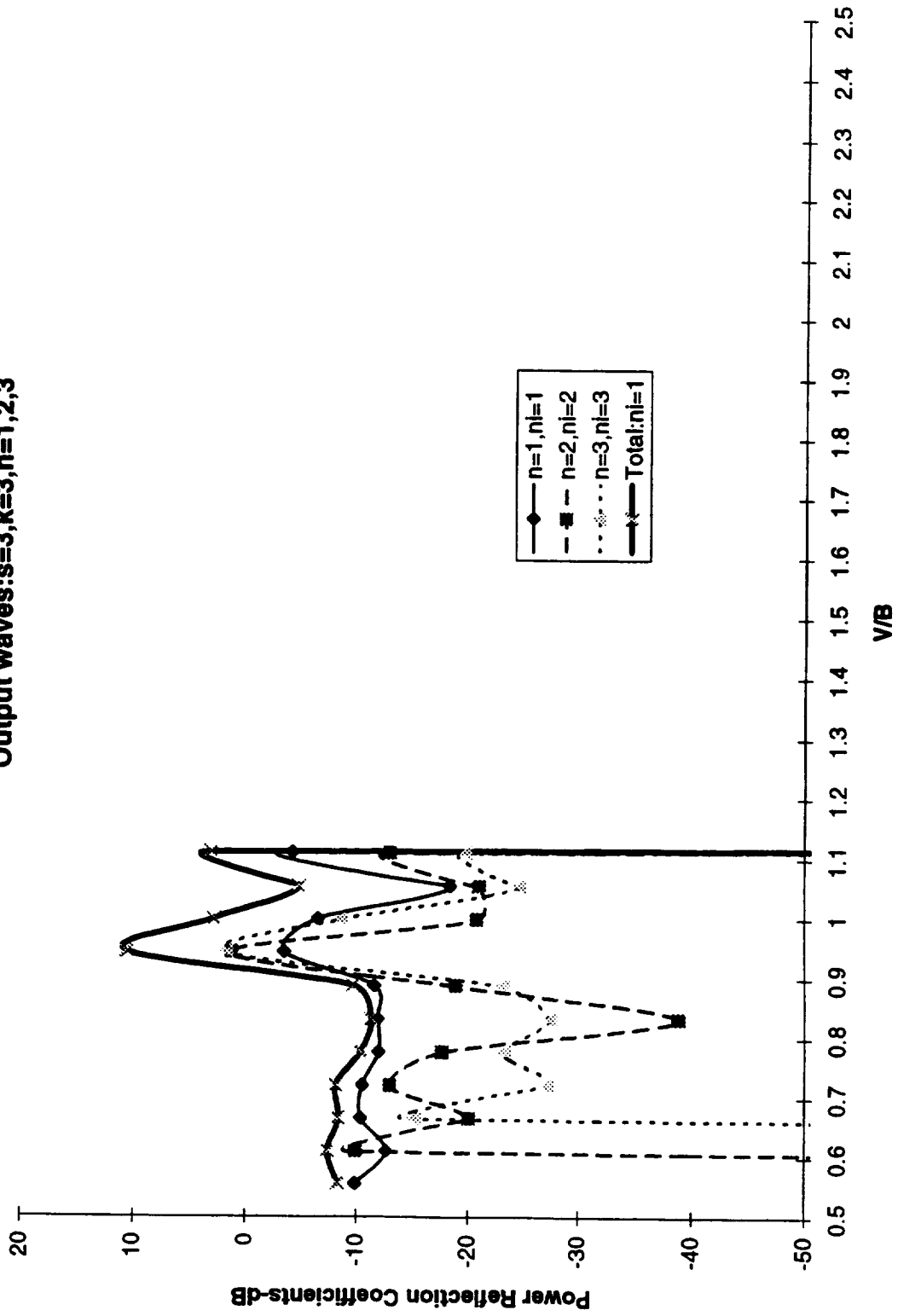
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=2, k_l=3, n_l=1$

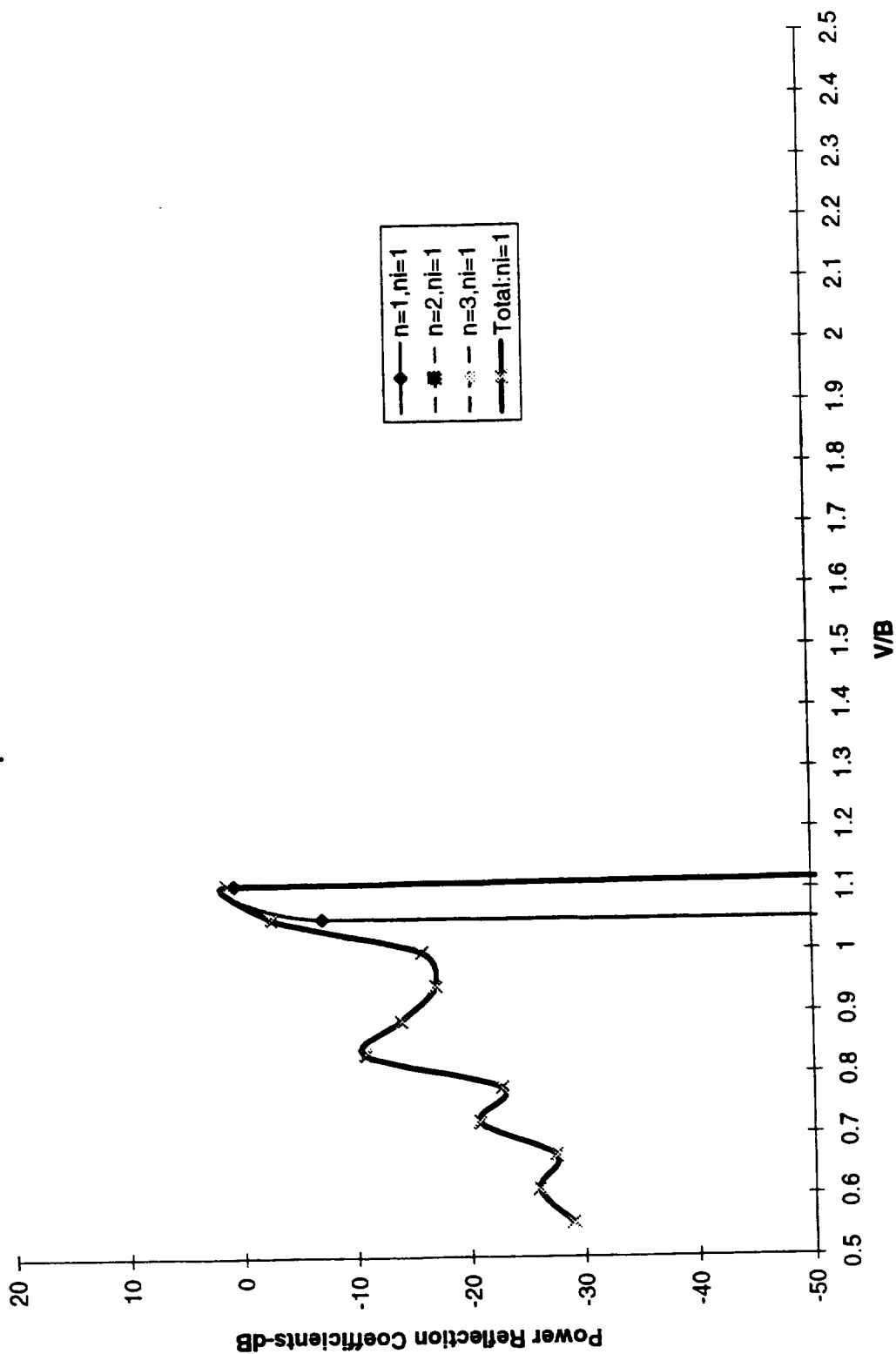
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

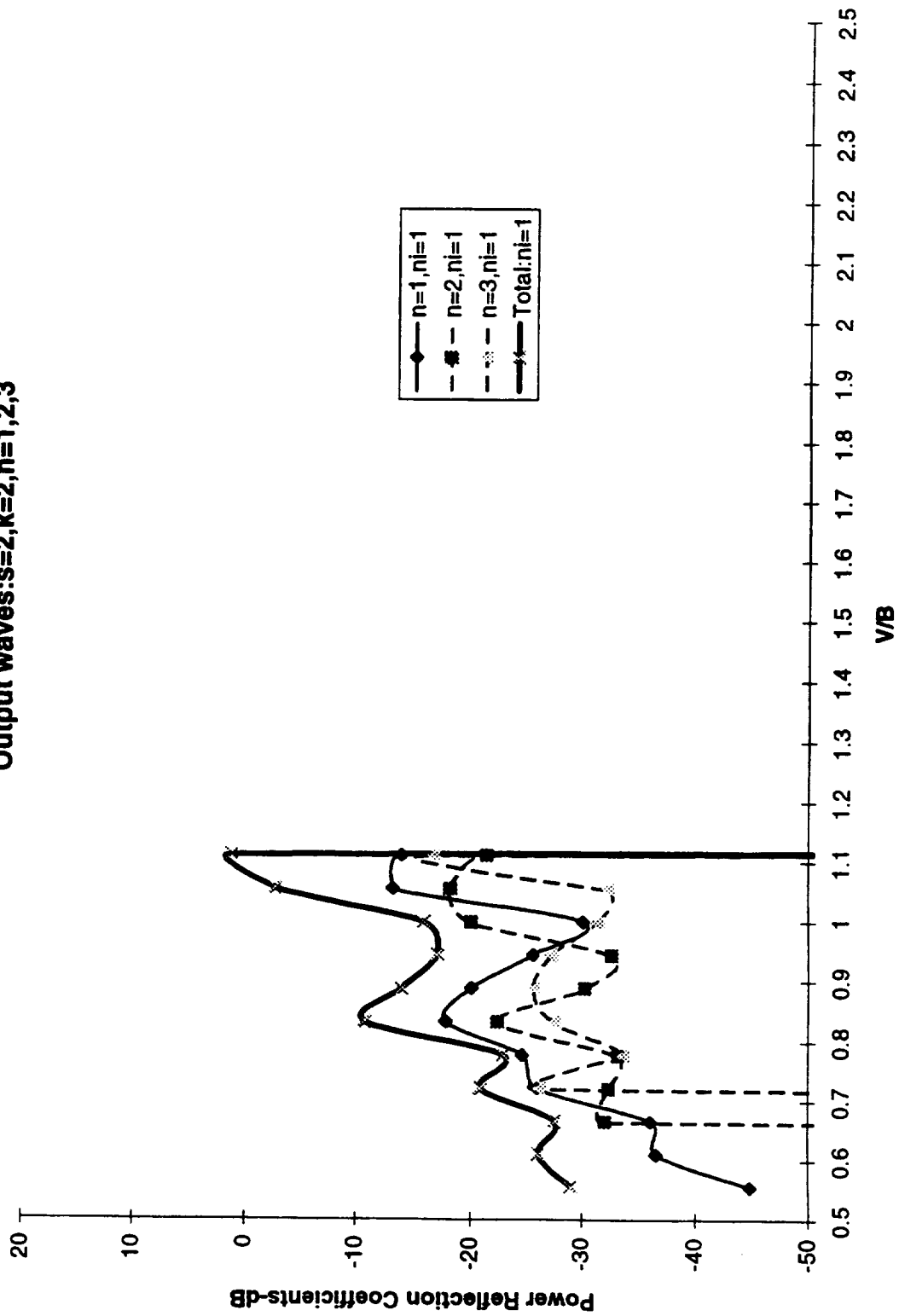
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

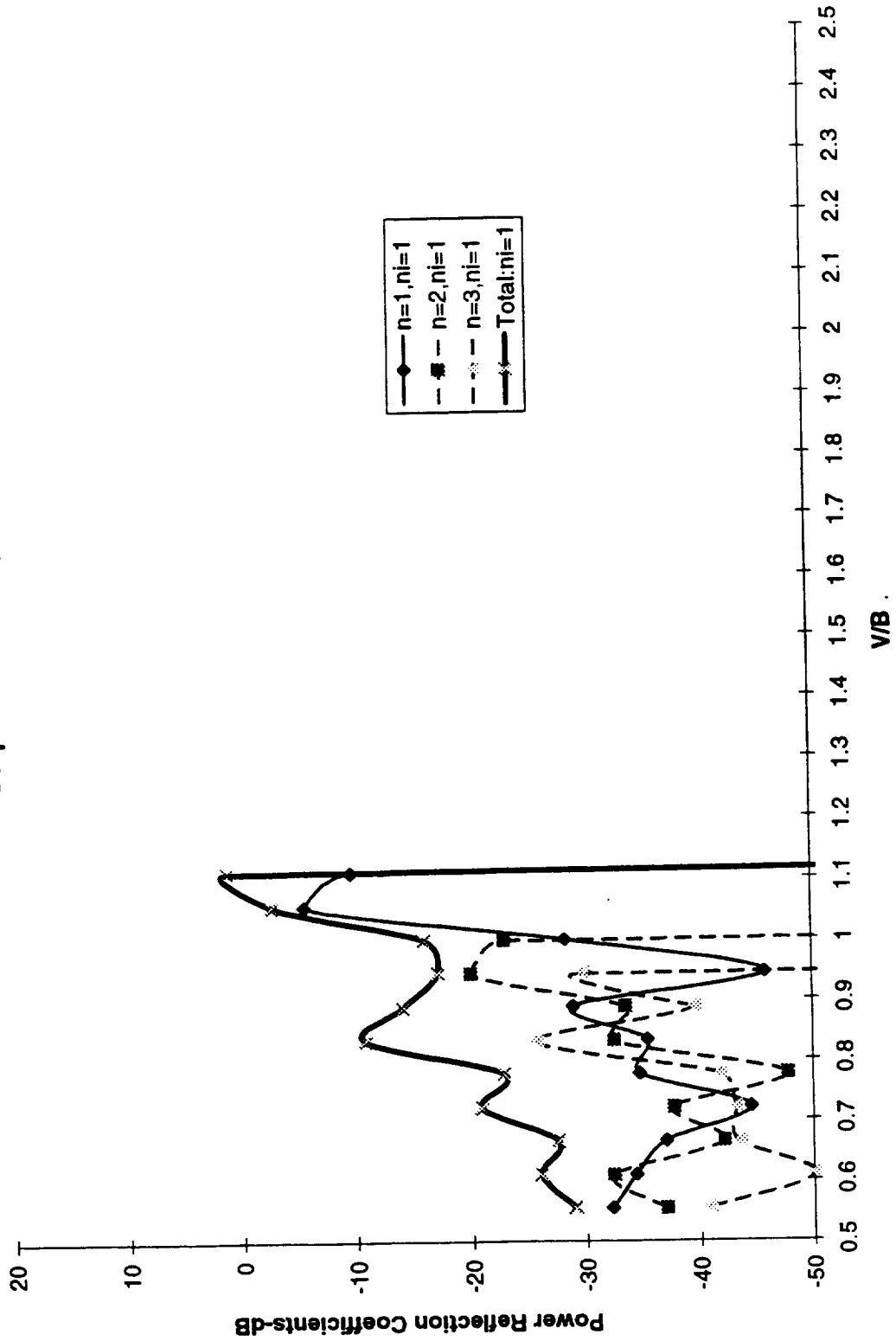
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

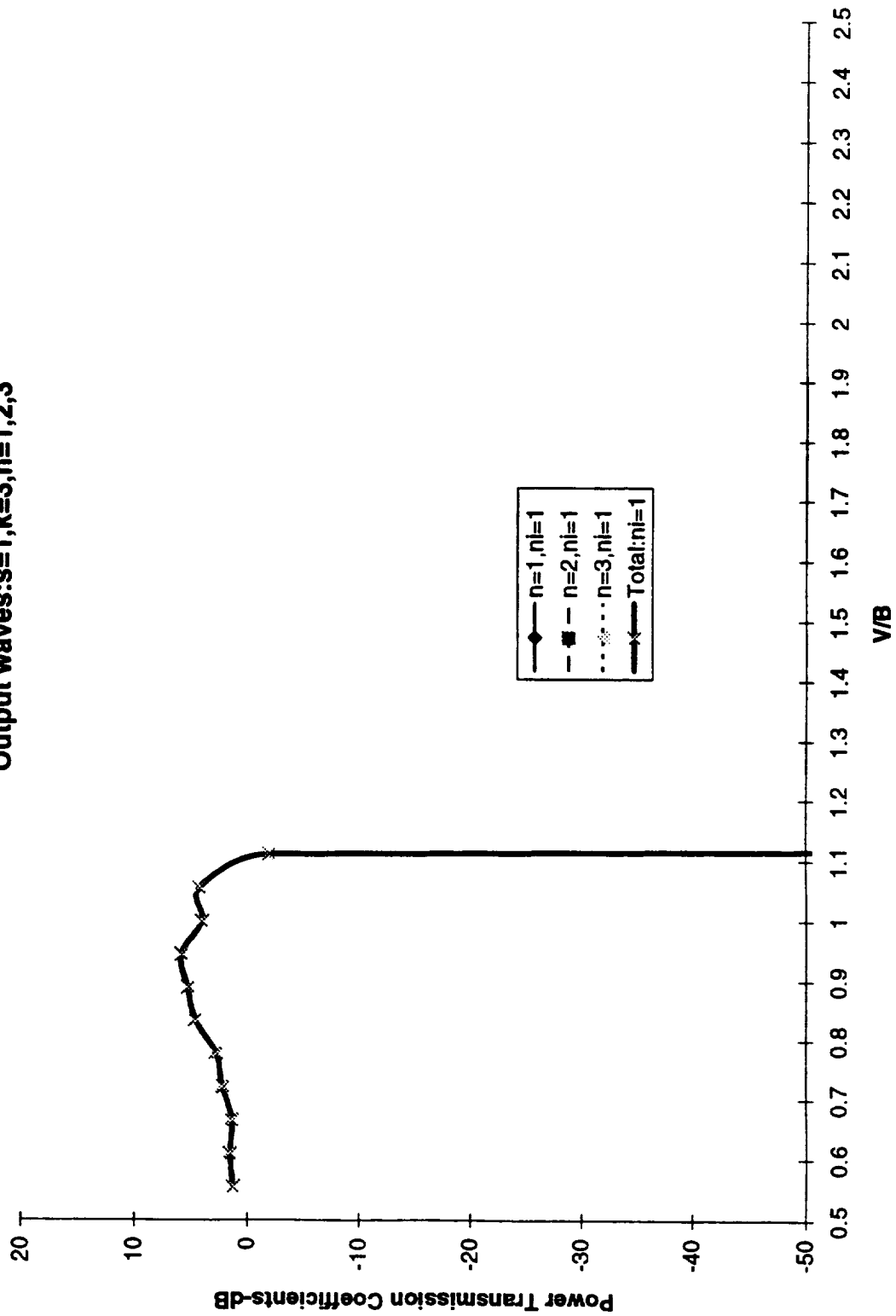
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

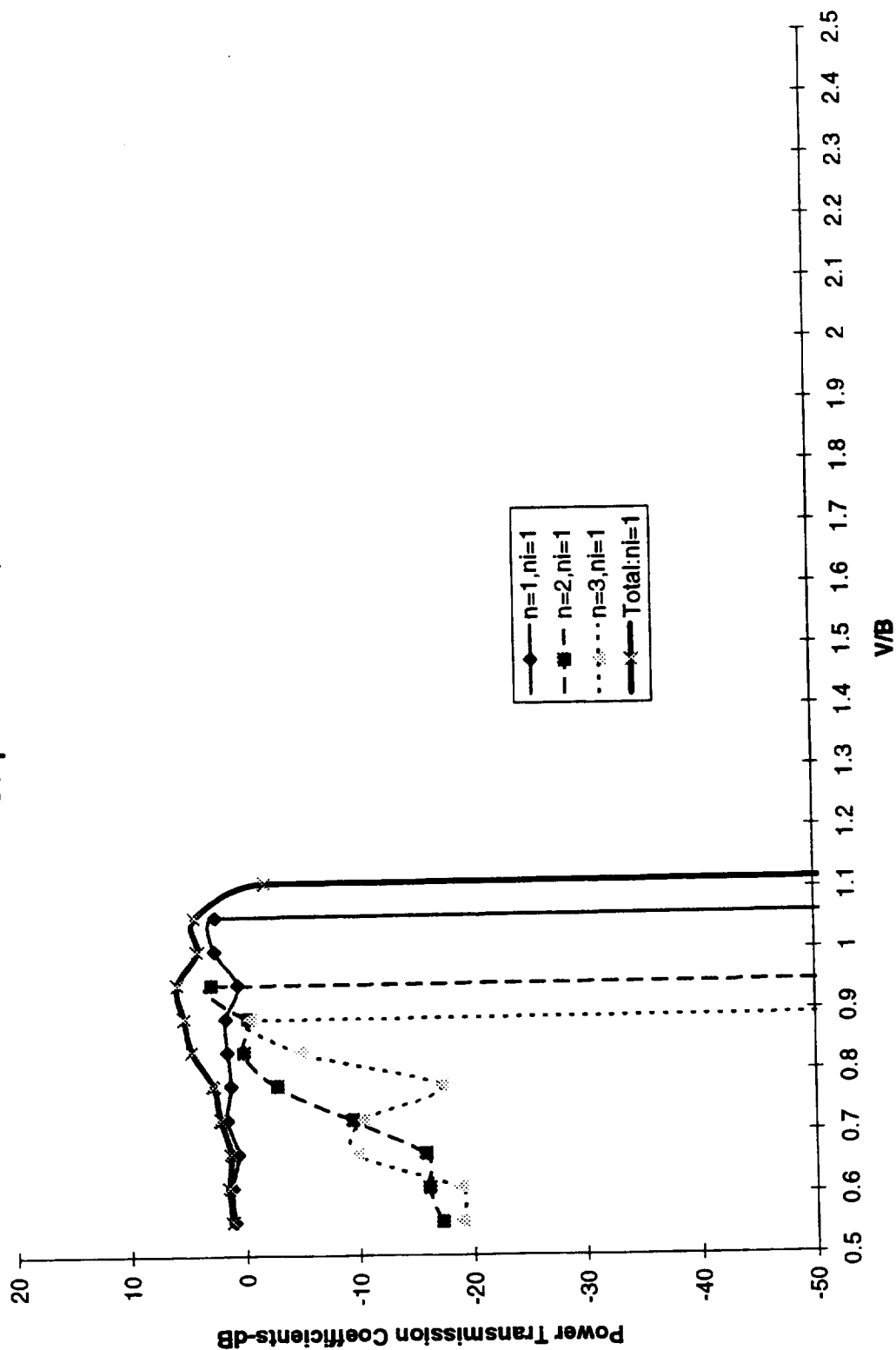
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

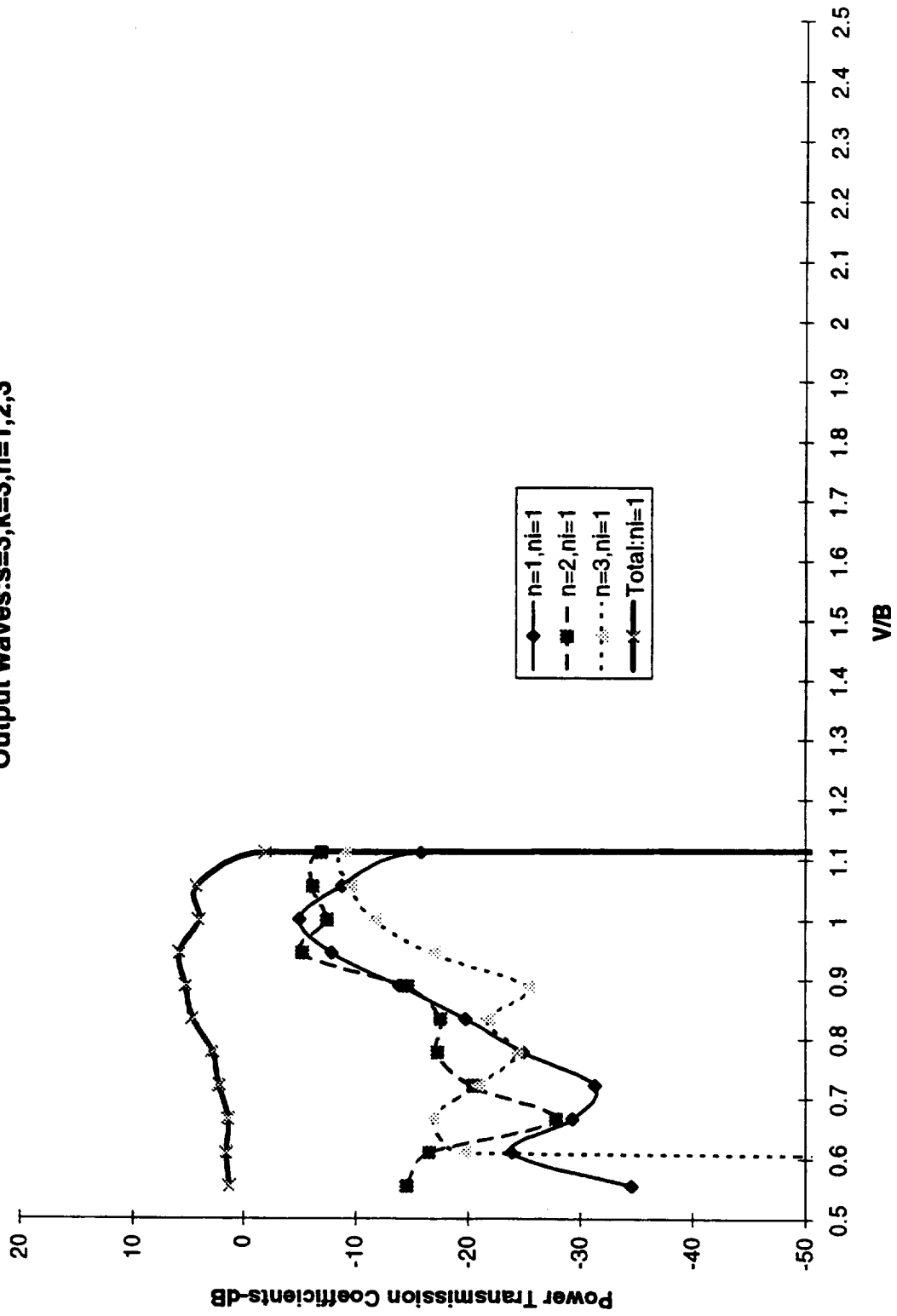
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

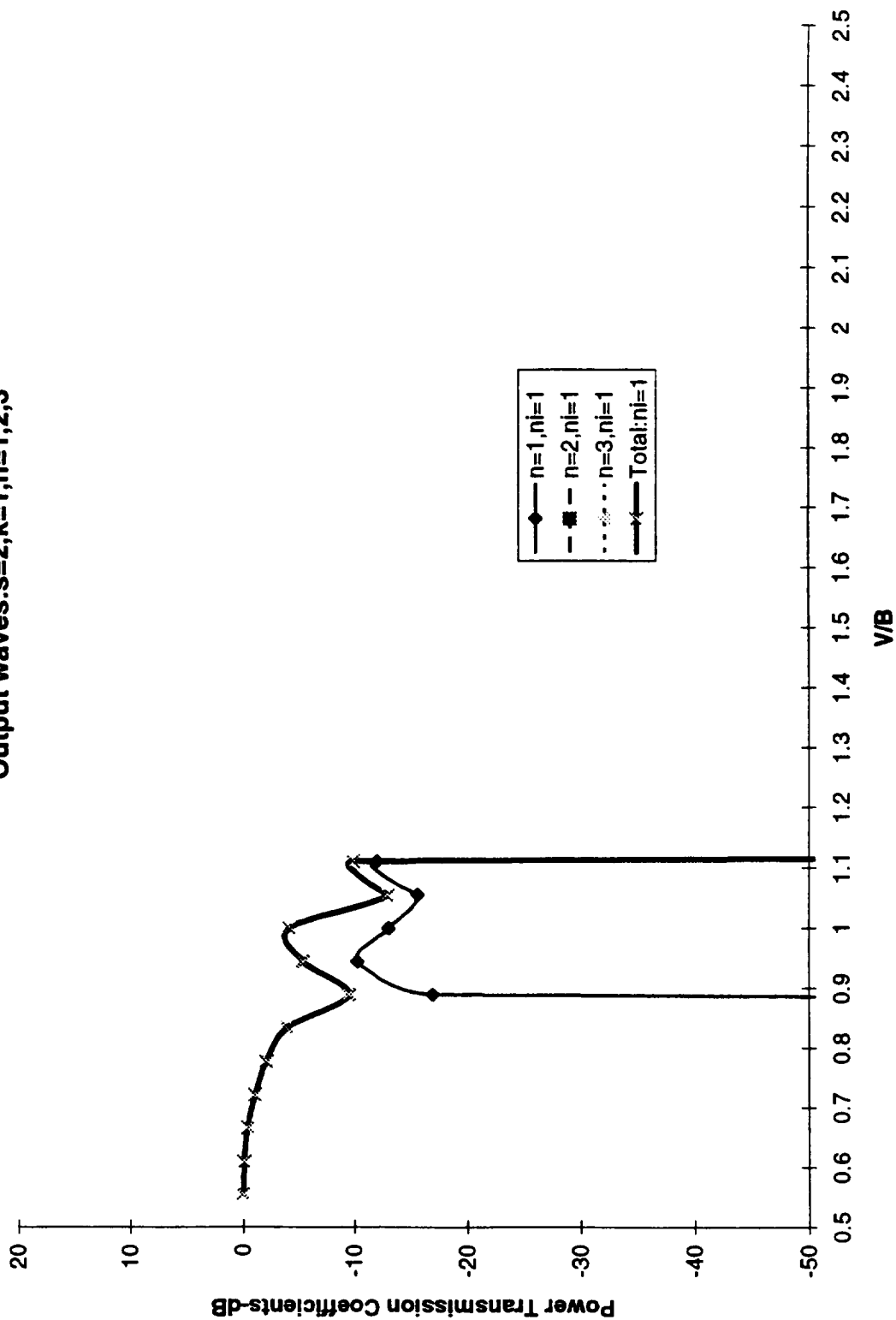
Output wave: $s=3, k=3, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

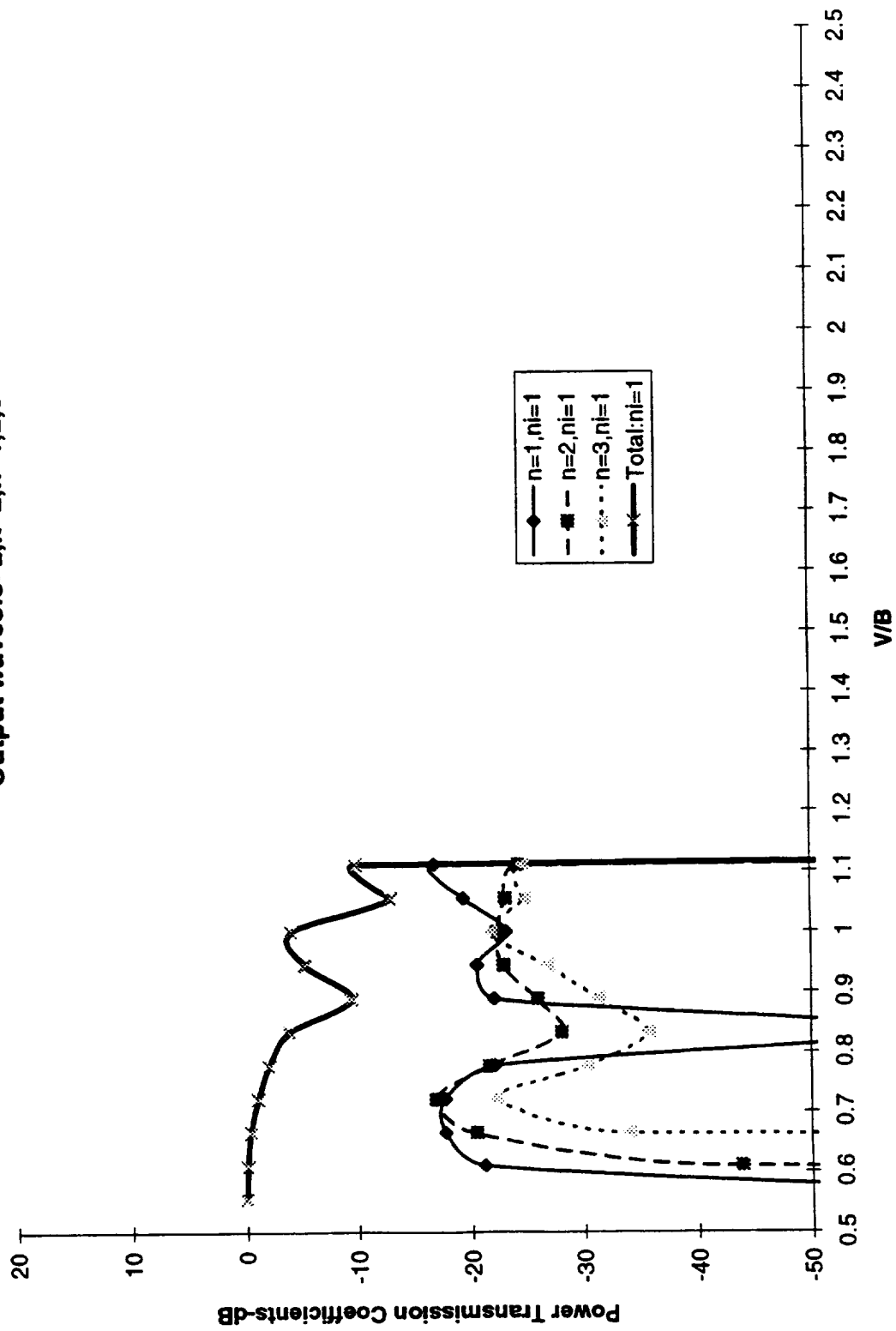
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=1$

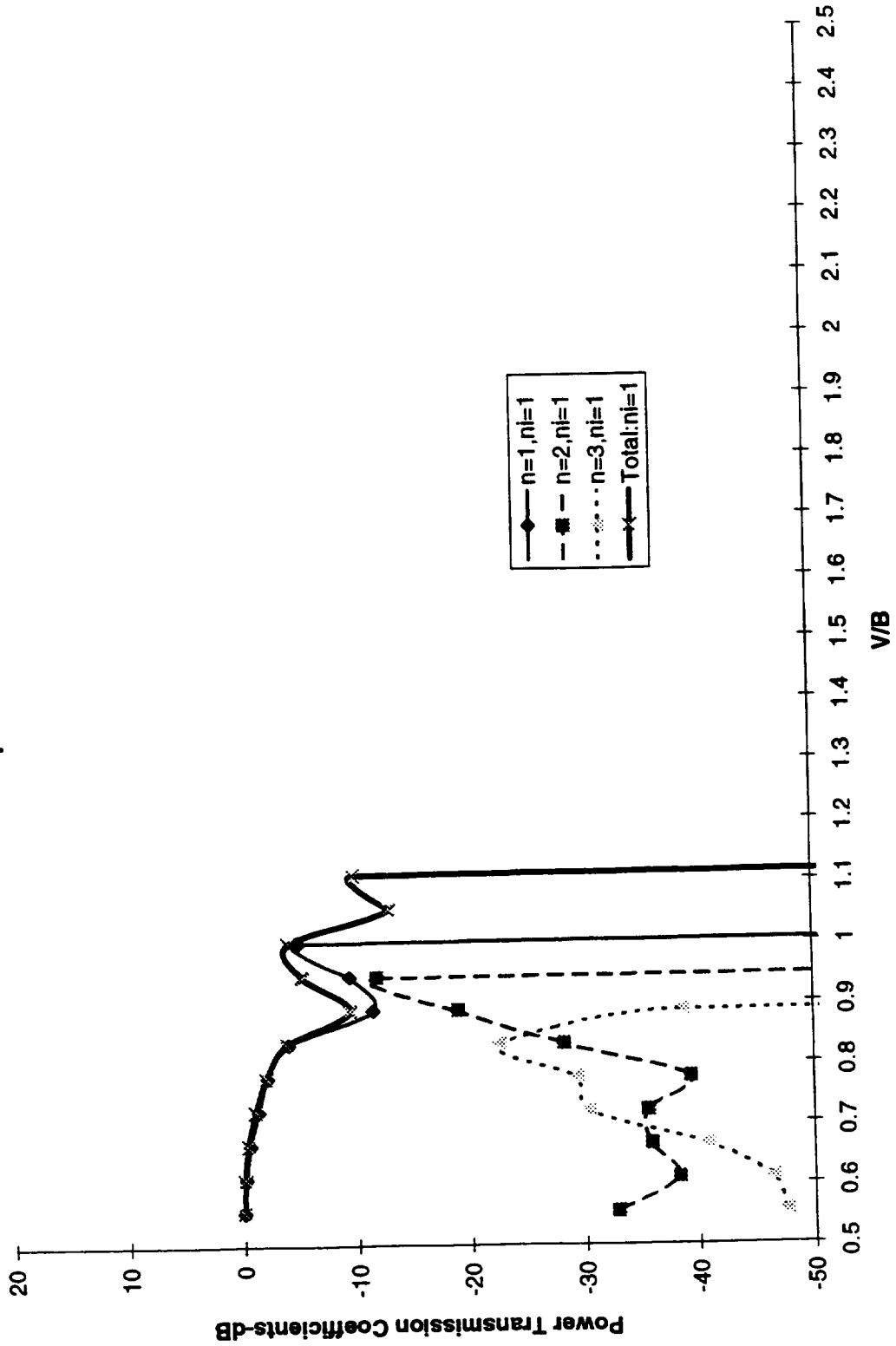
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_l=2, k_l=3, n_l=1$

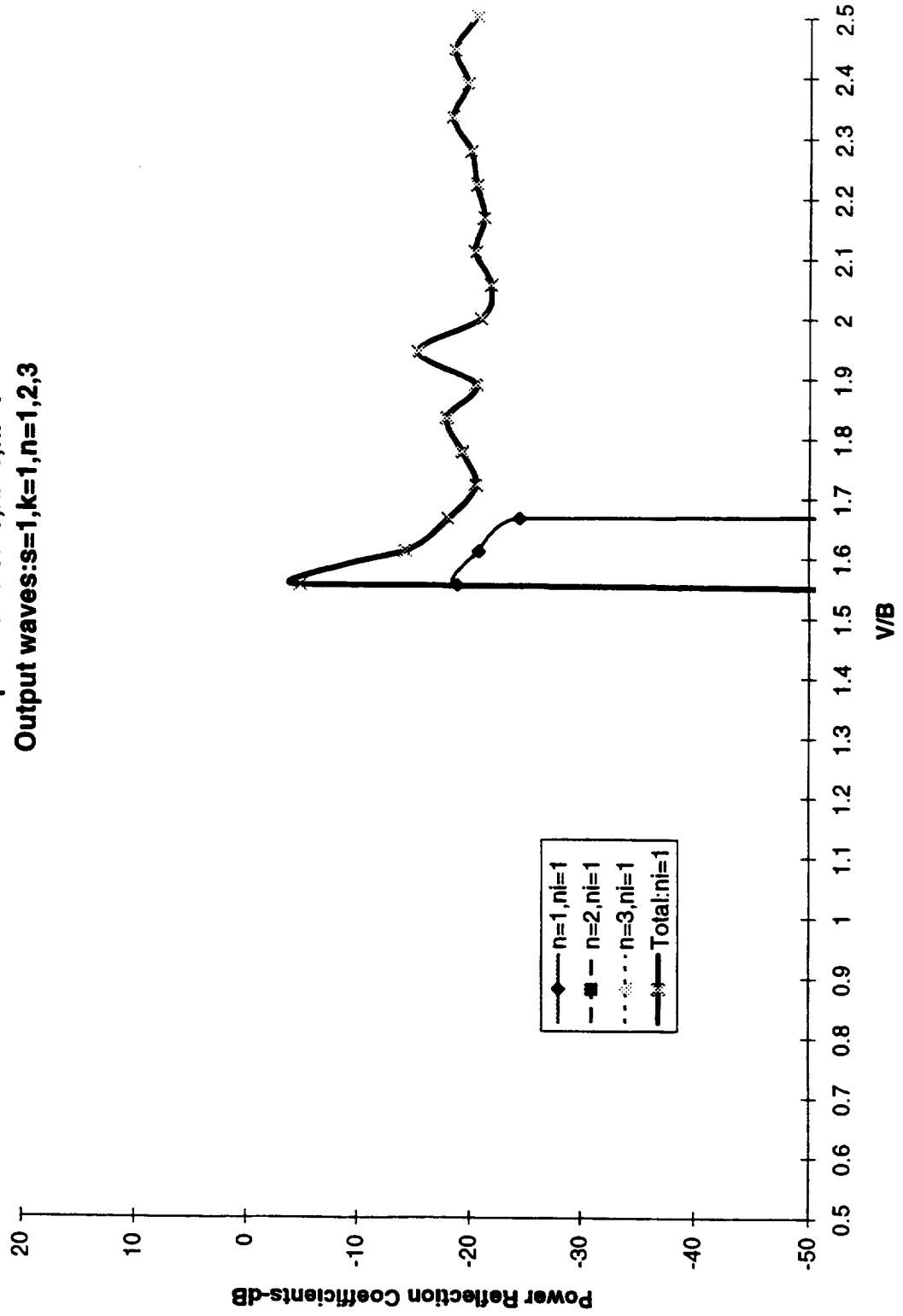
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

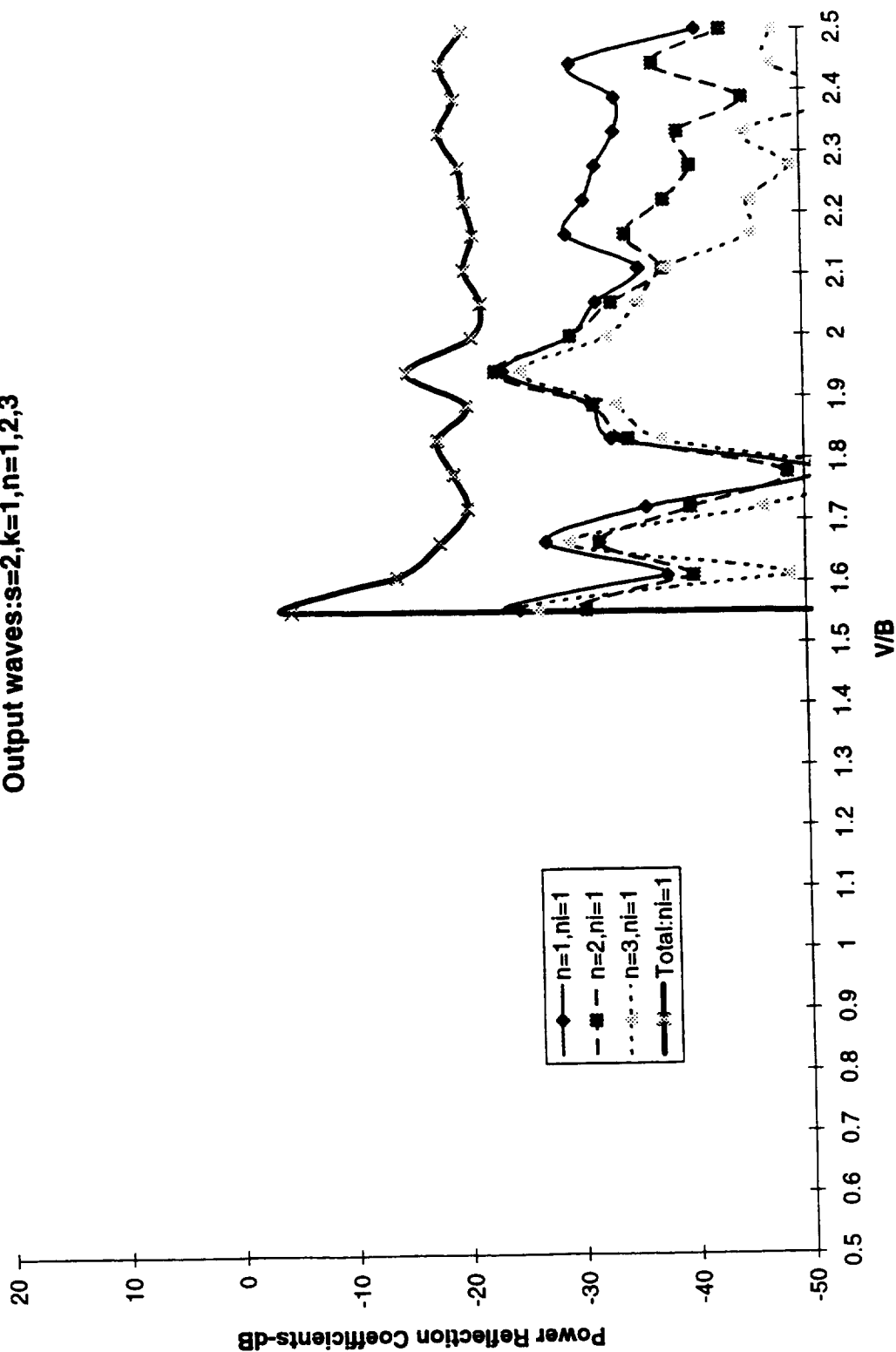
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

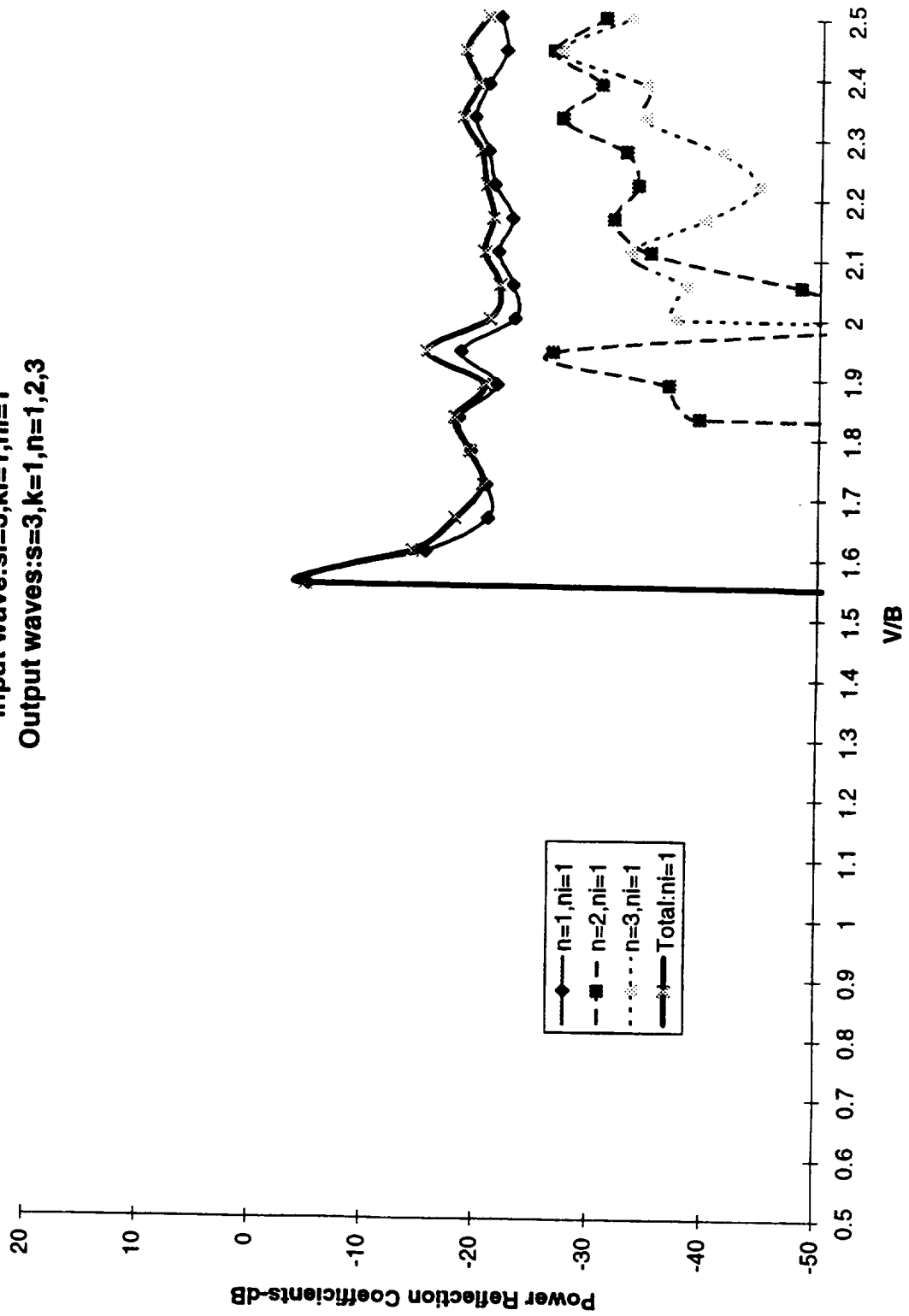
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

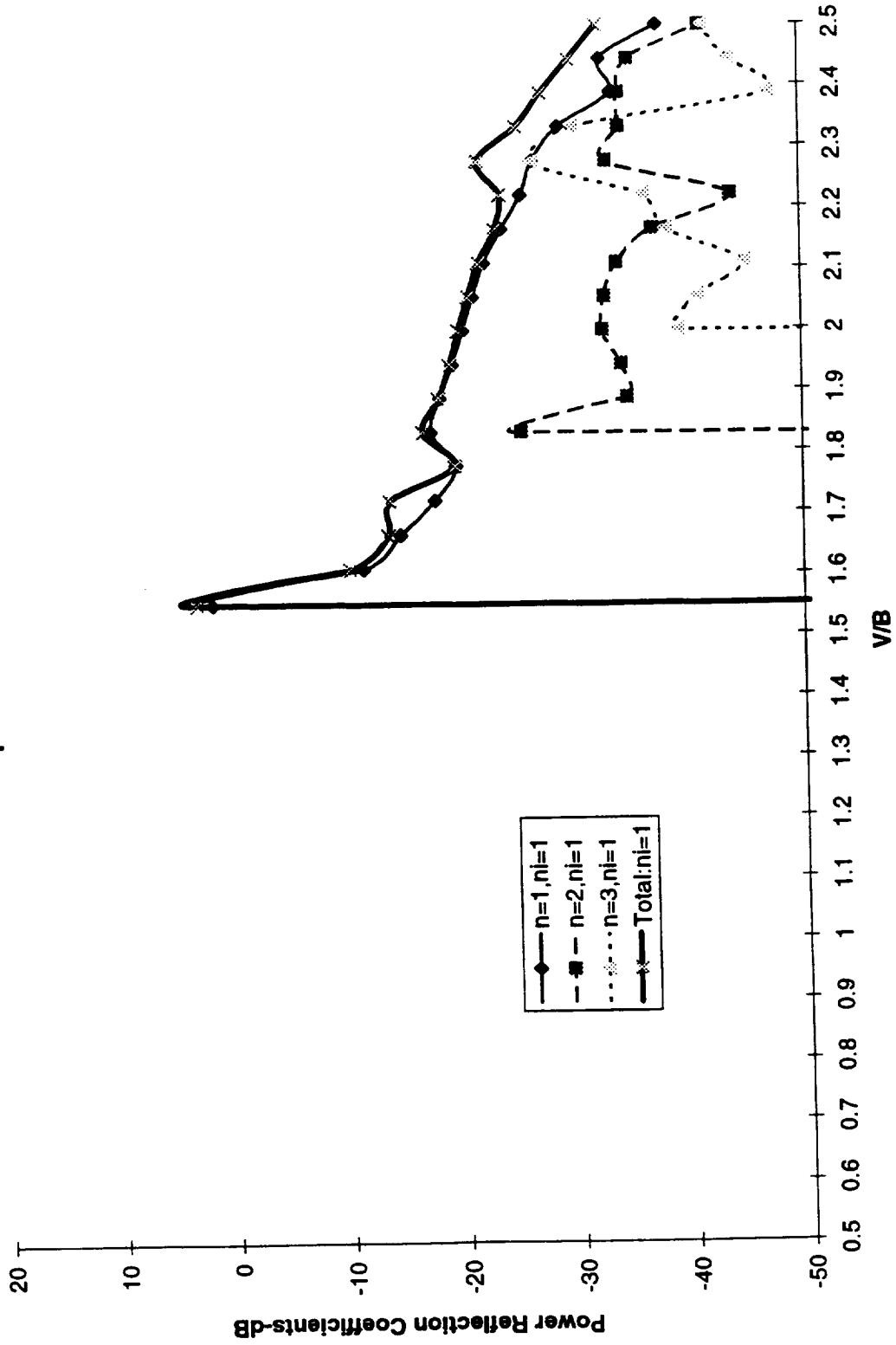
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $sl=3, kl=1, nl=1$

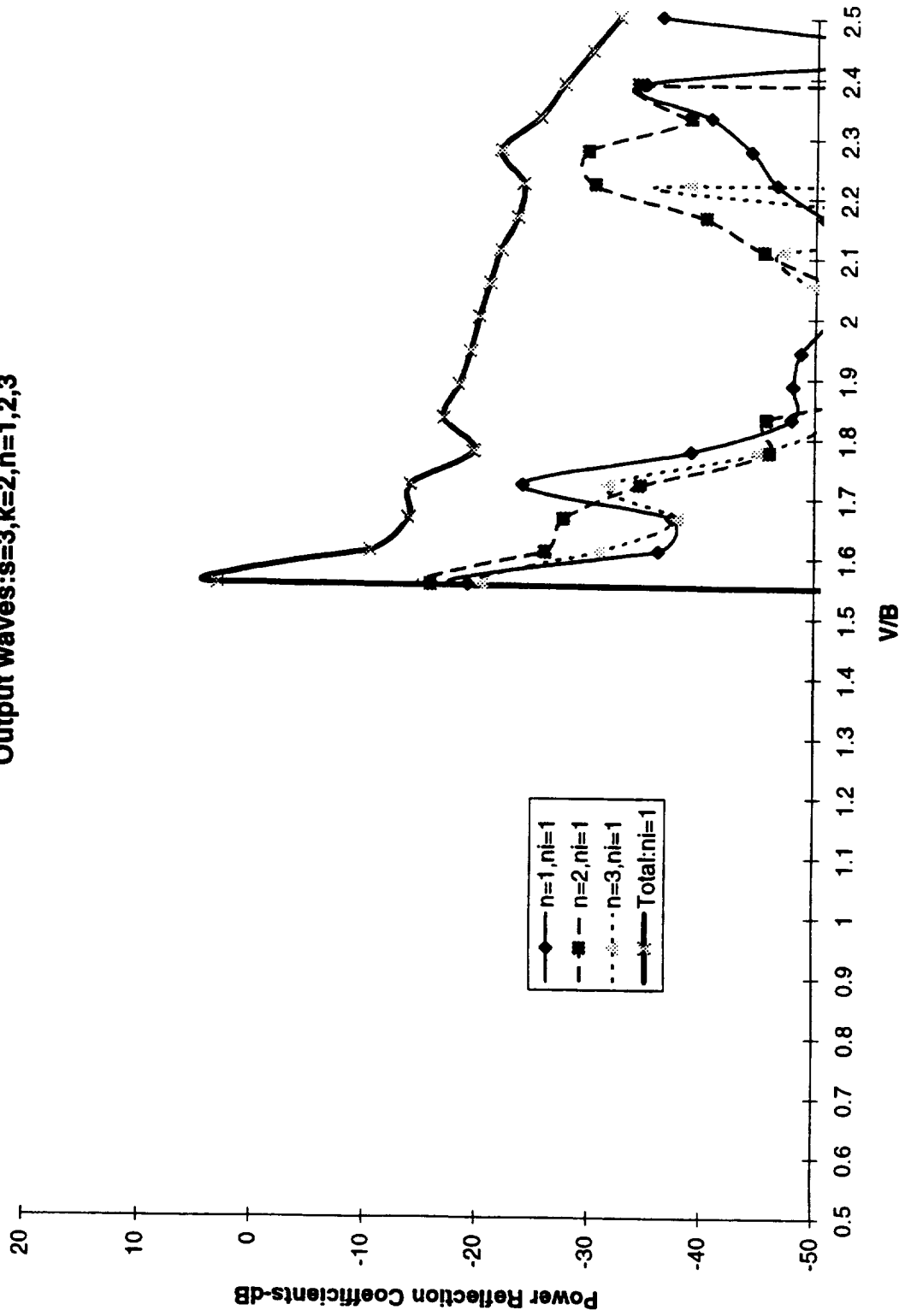
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

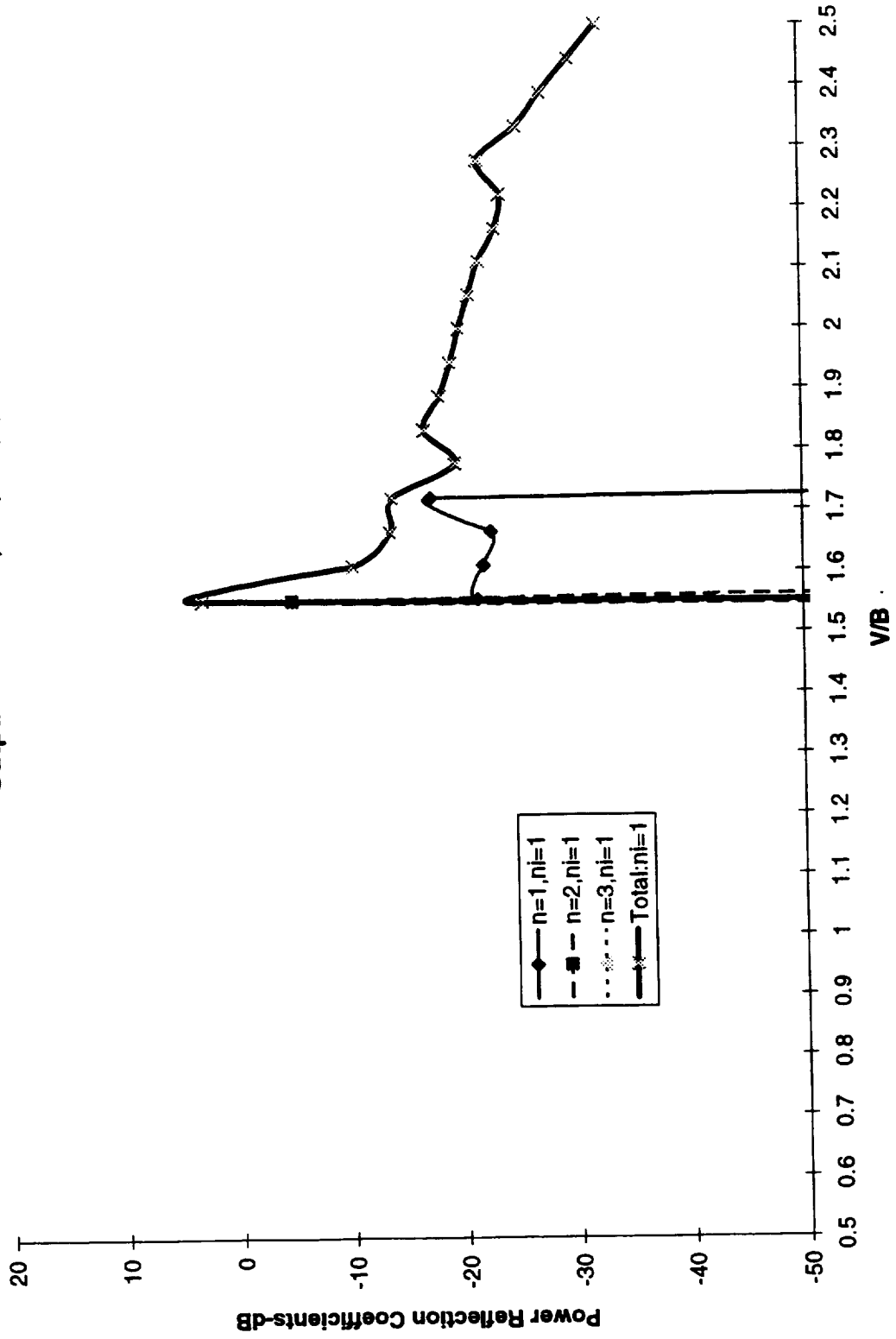
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $sl=3, ki=1, ni=1$

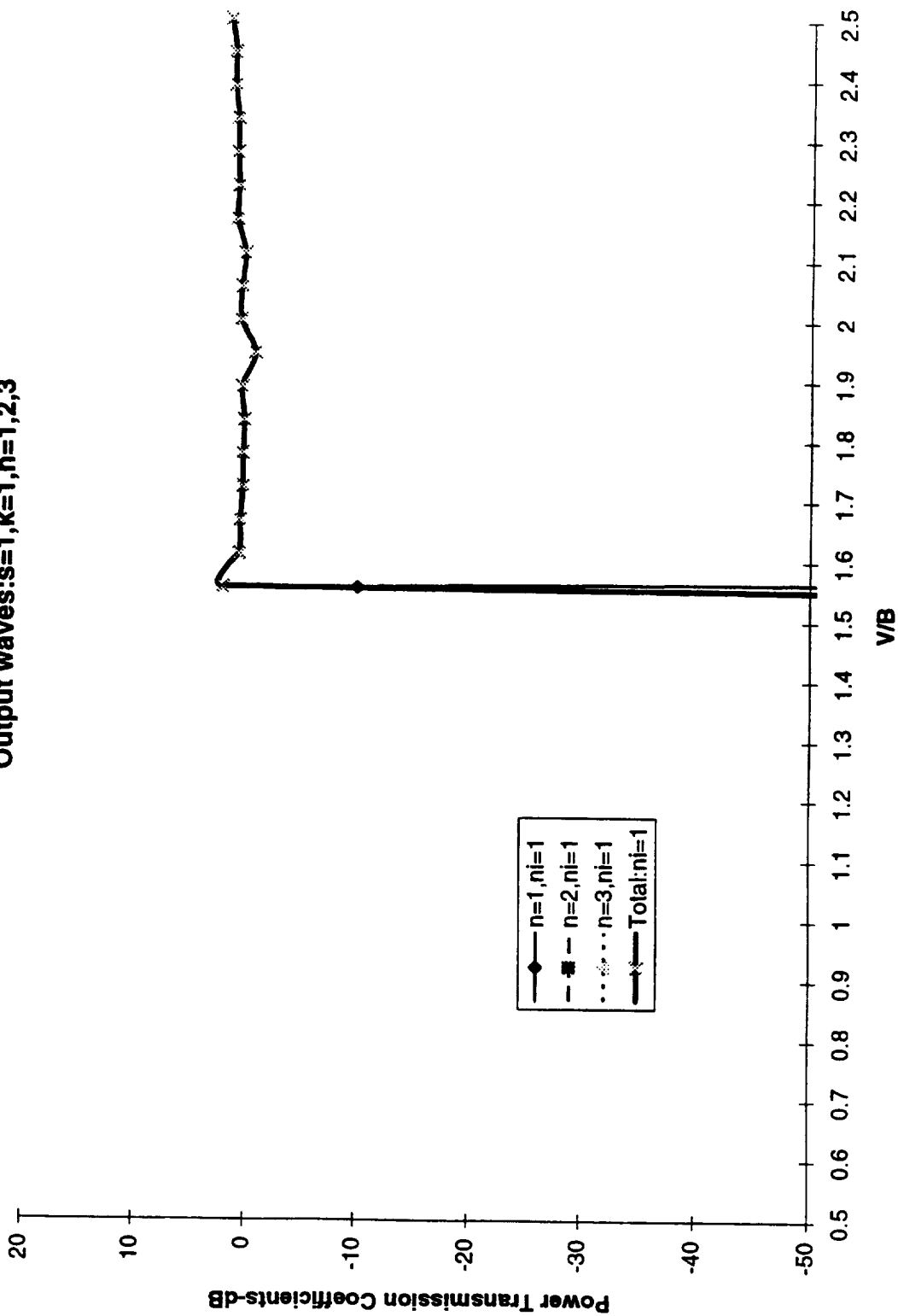
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

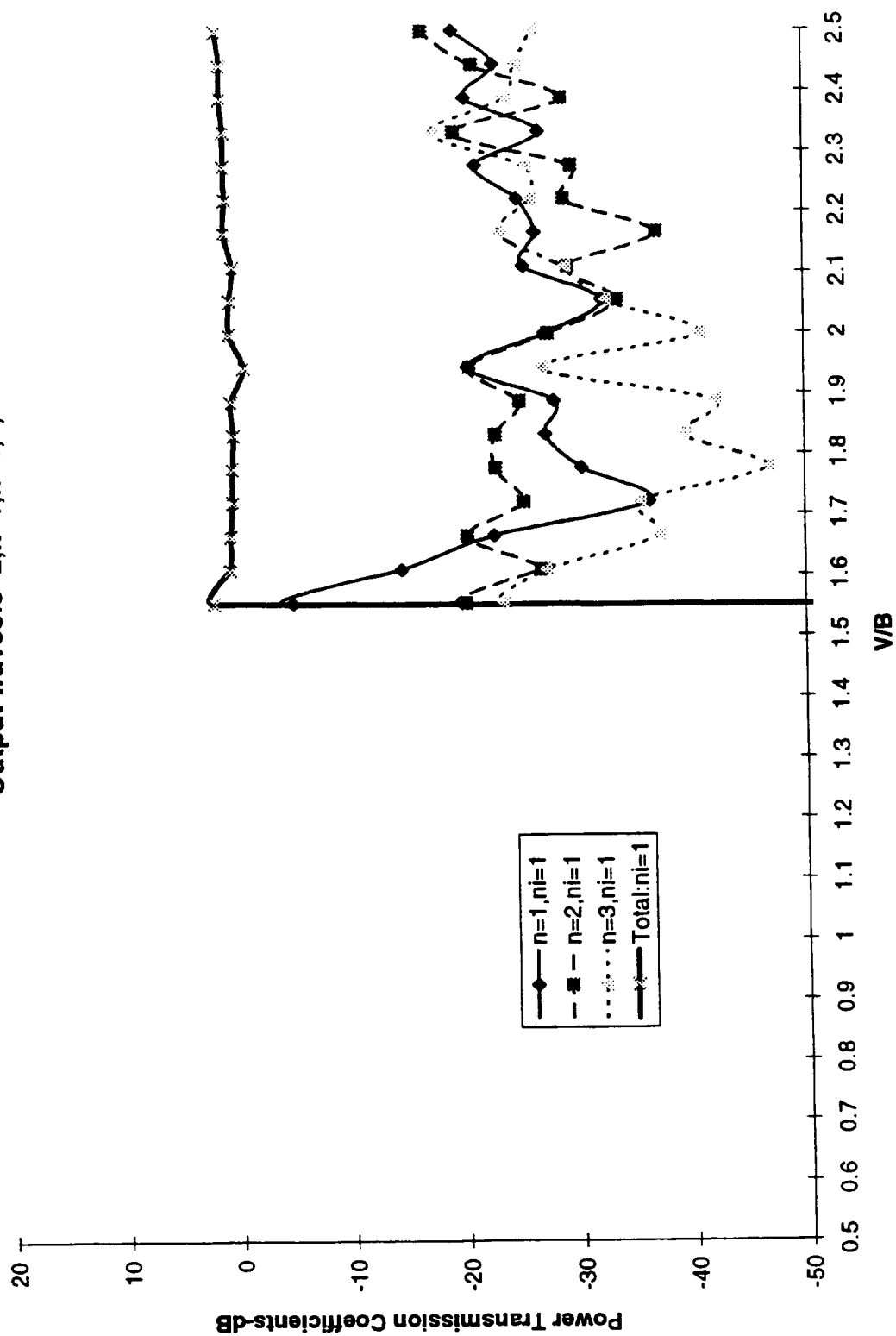
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

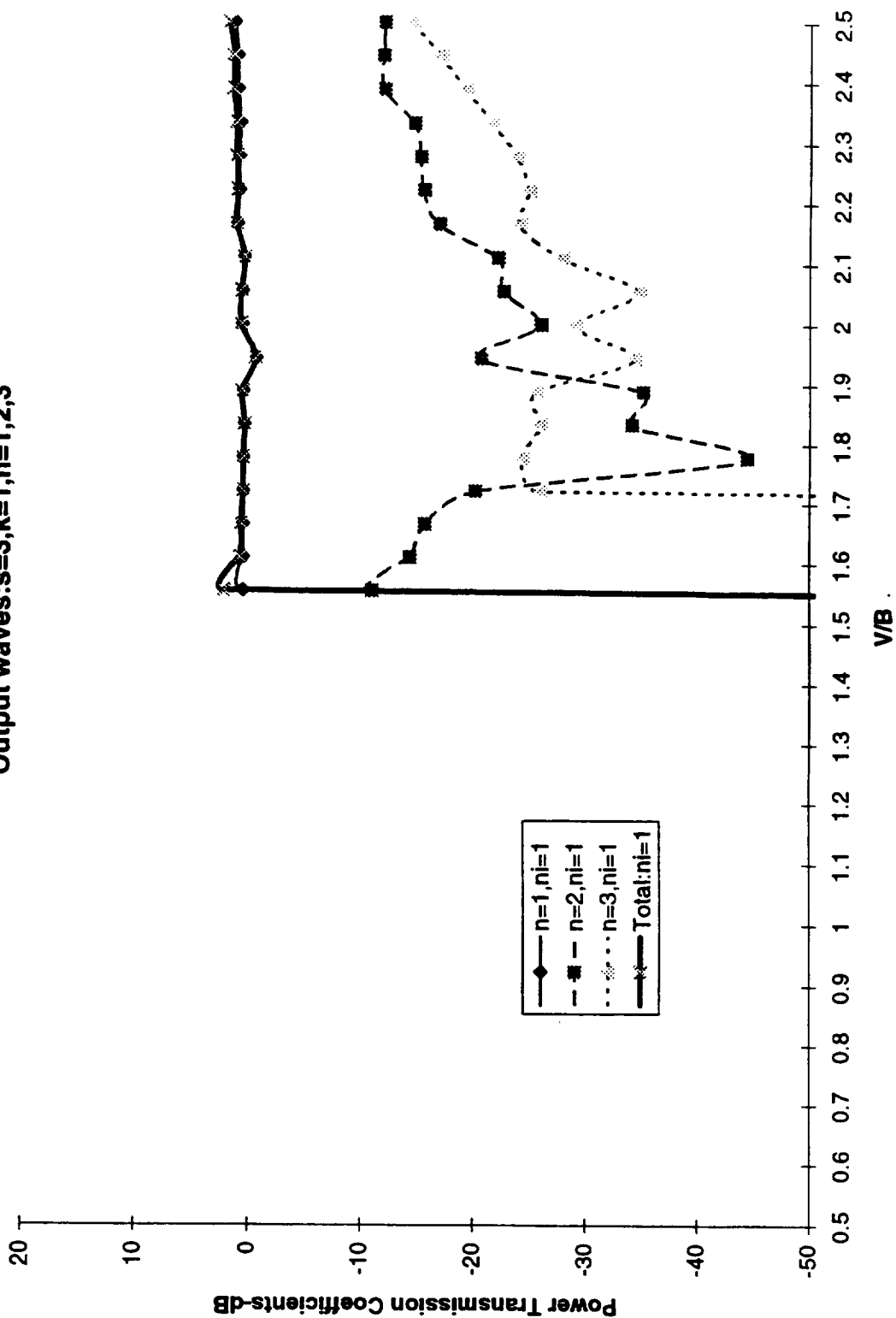
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

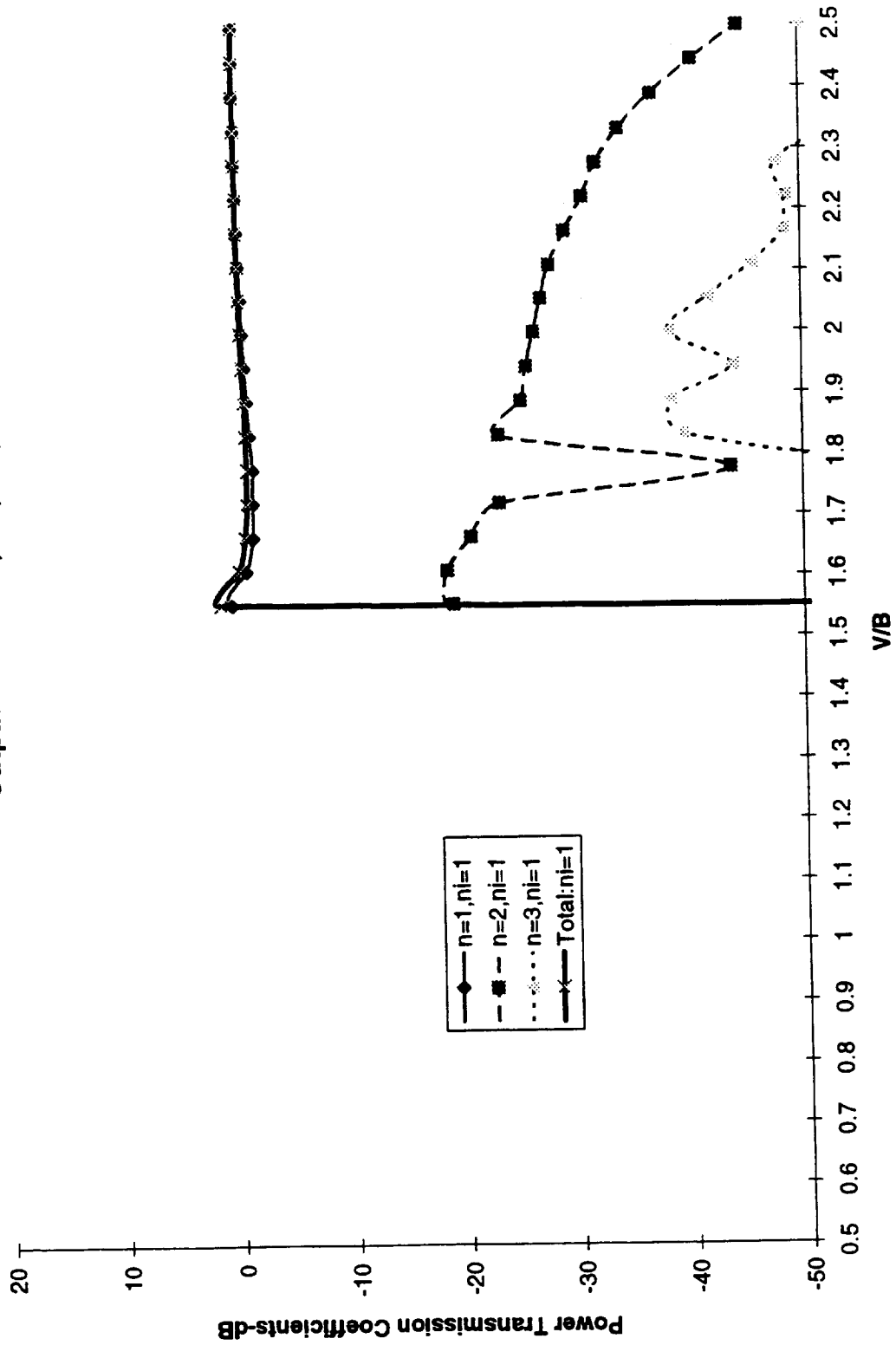
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

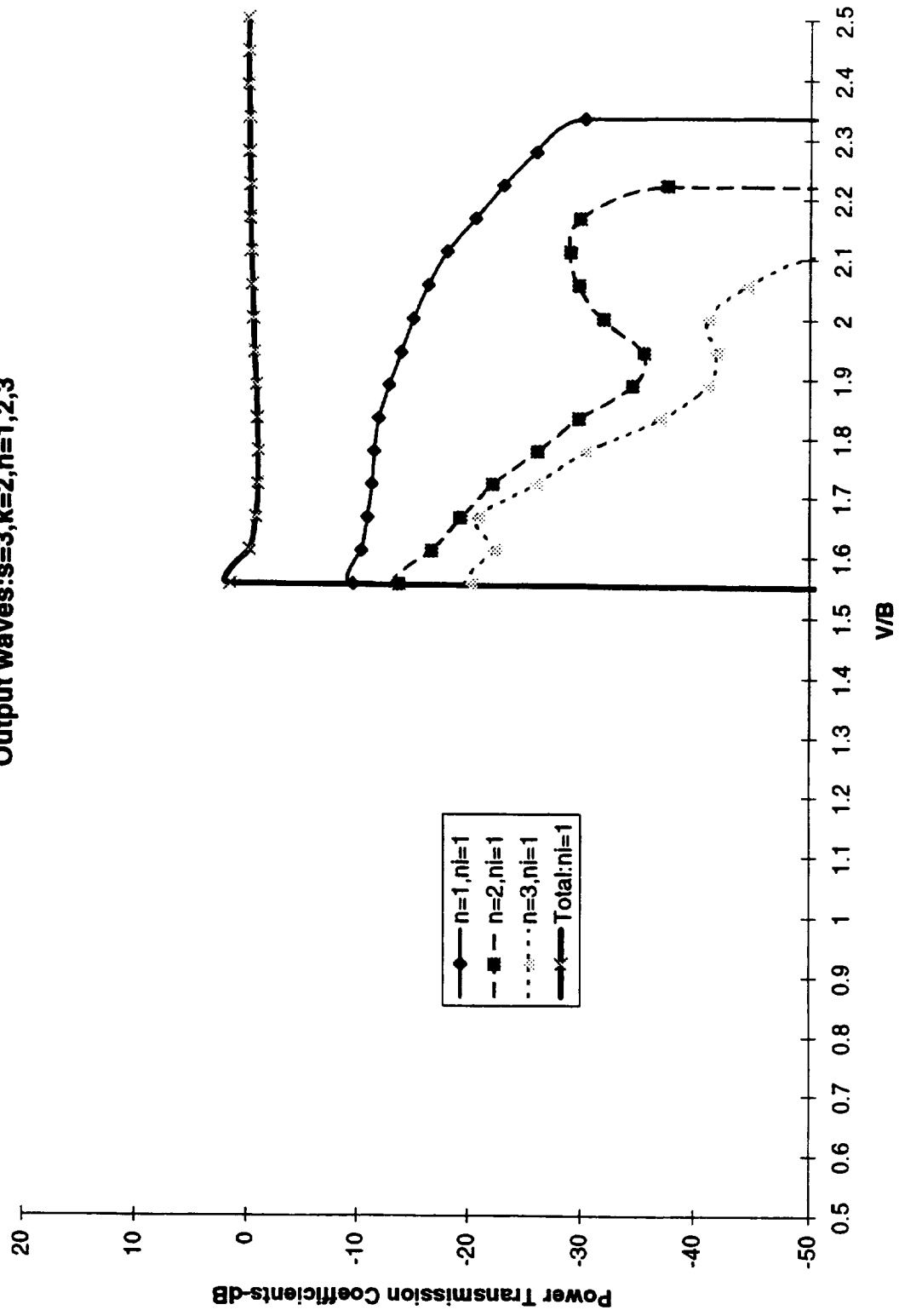
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

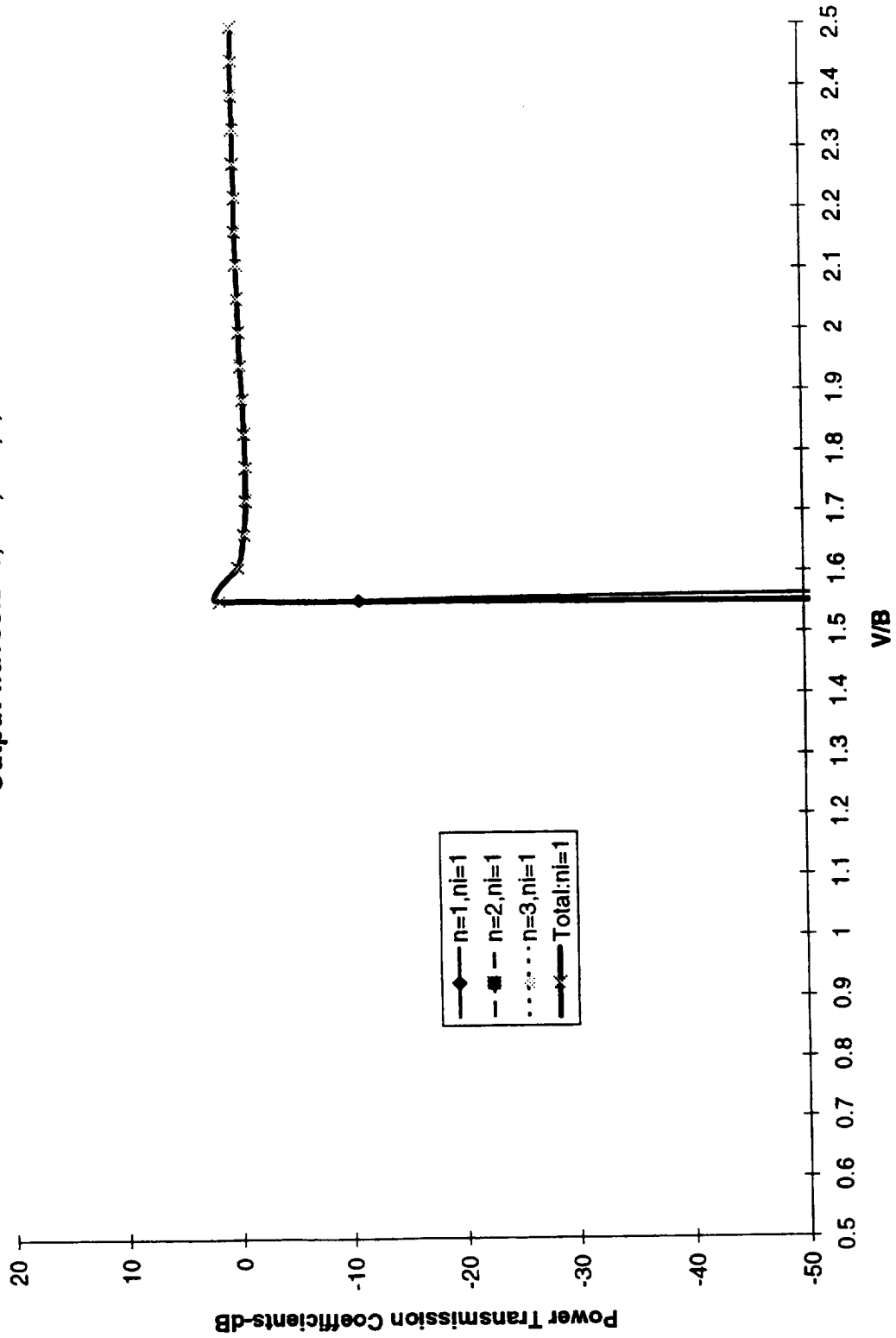
Output waves: $s=3, k=2, n=1, 2, 3$



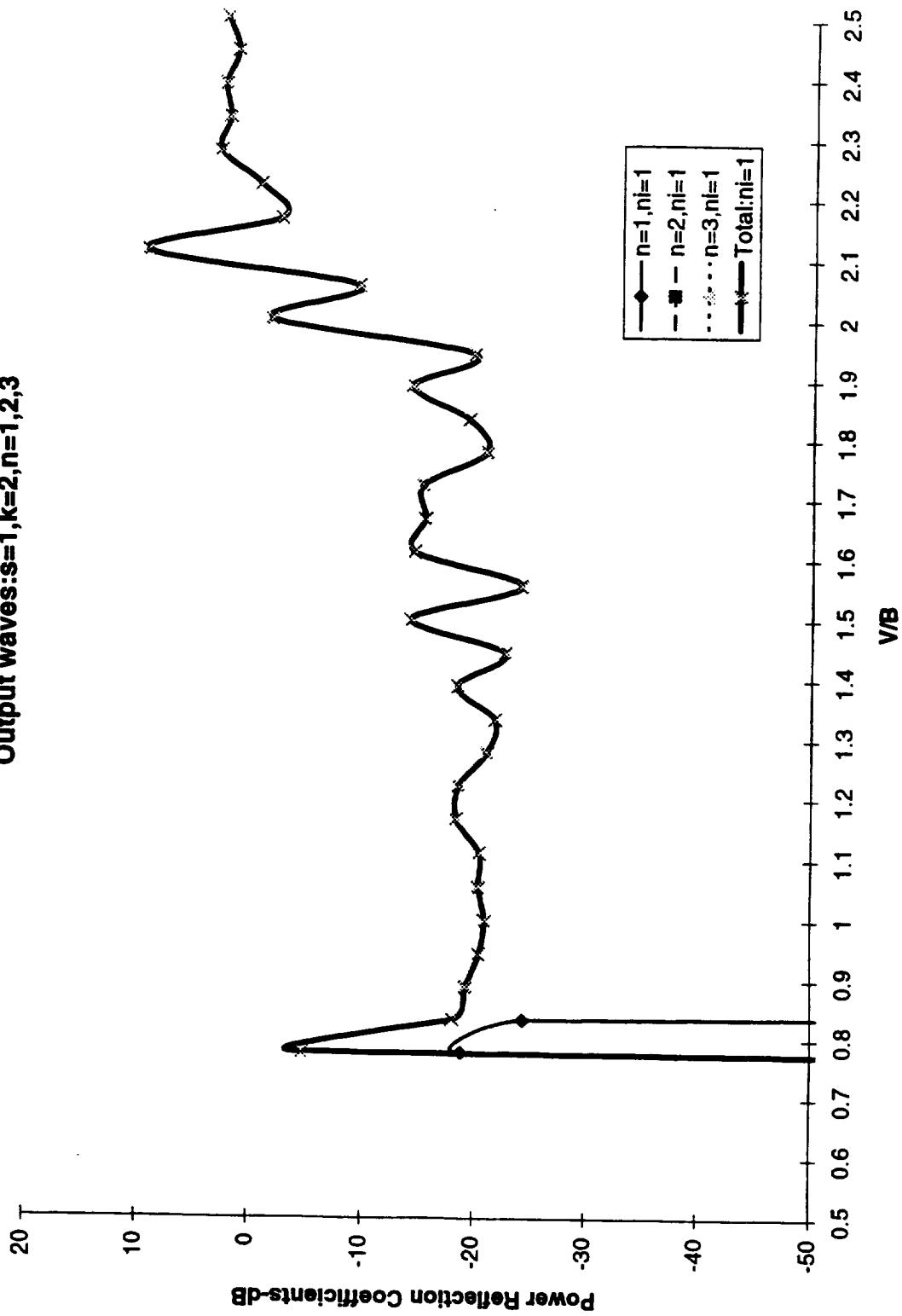
Stator Transmission-Mld Speed Case

Input wave: $s_i=3, k_i=1, n_i=1$

Output waves: $s=3, k=3, n=1, 2, 3$



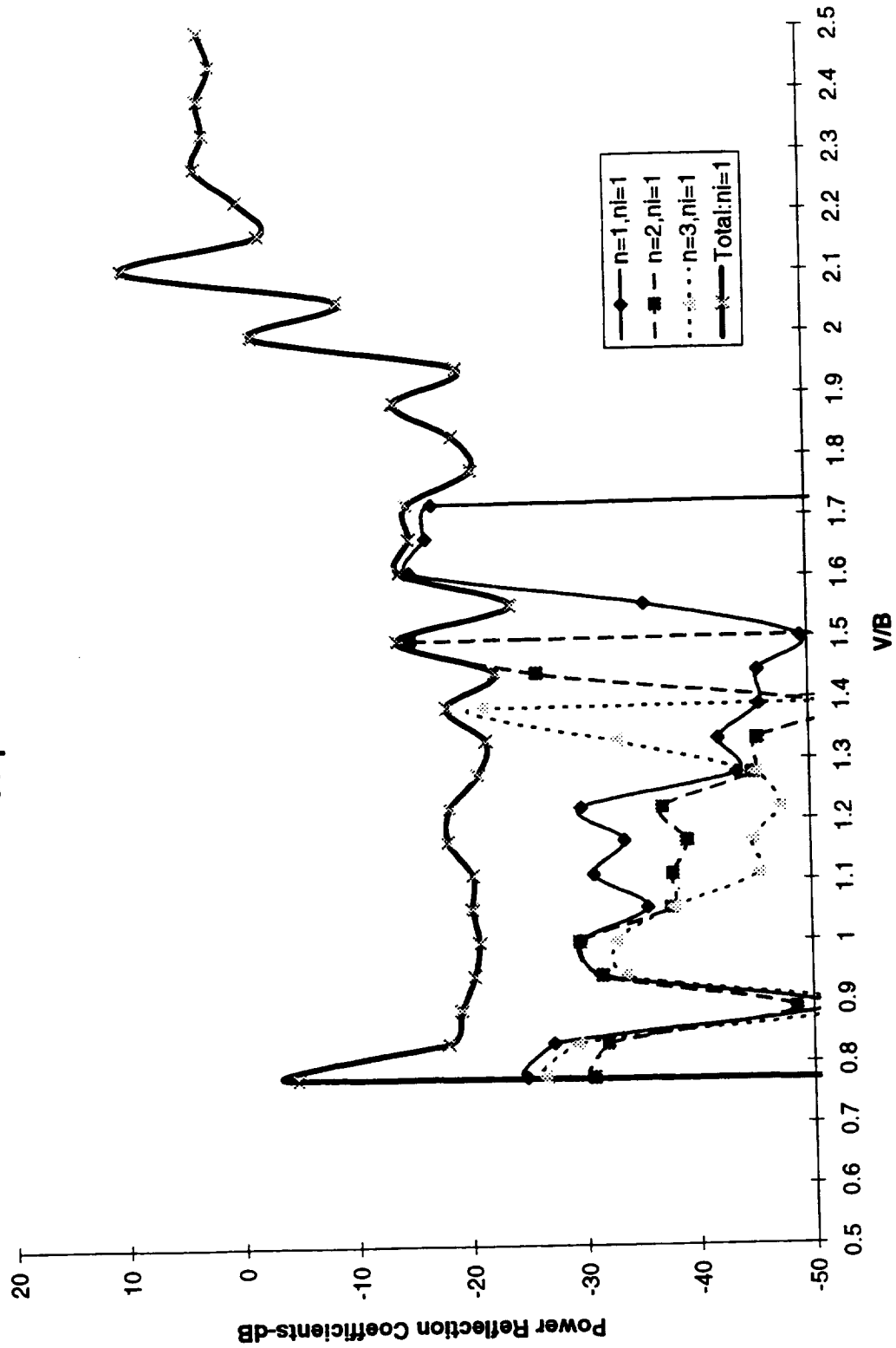
Rotor Reflection-Mid Speed Case
Input wave: si=3,ki=2,ni=1
Output waves:s=1,k=2,n=1,2,3



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=1$

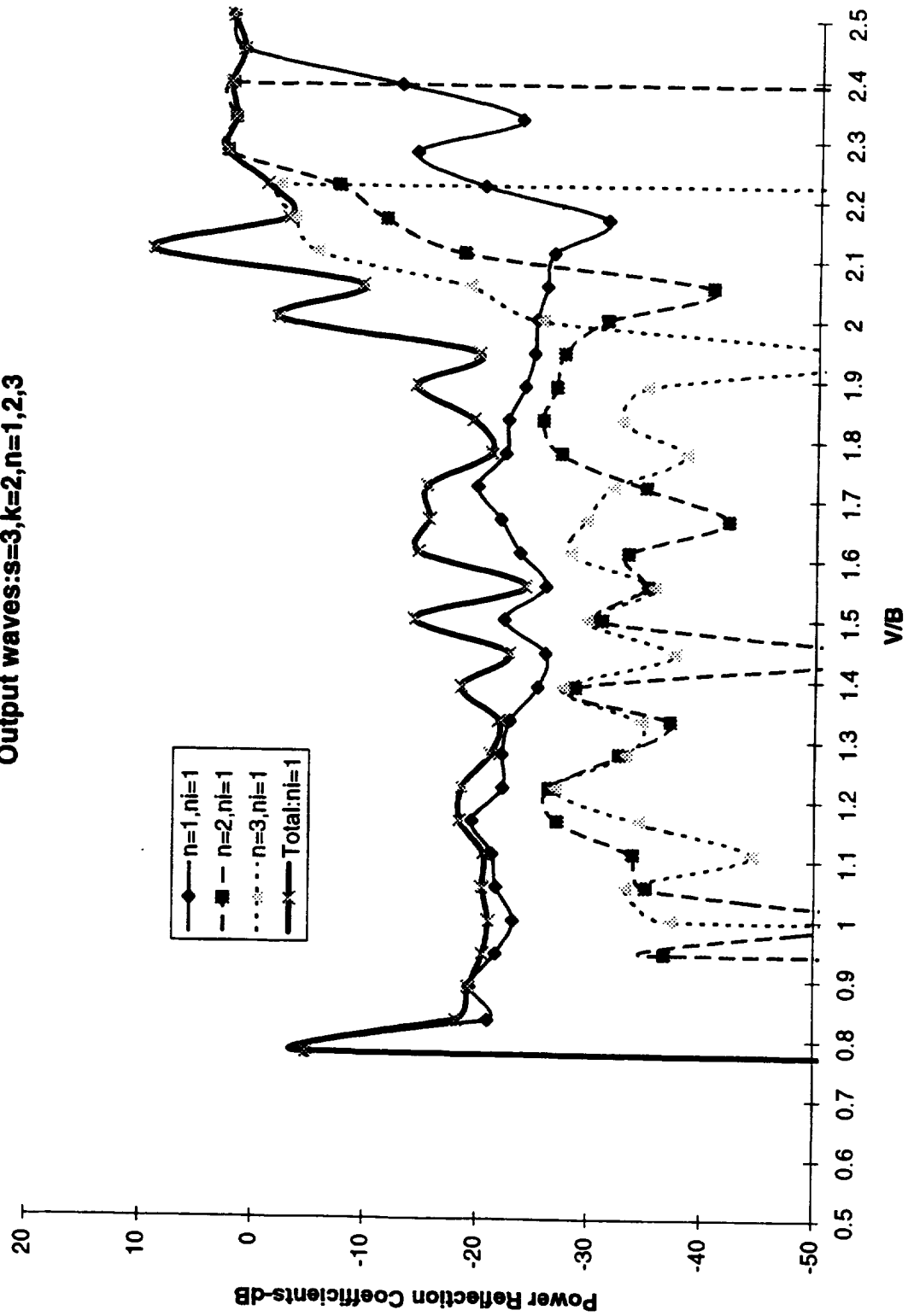
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=3, k_l=2, n_l=1$

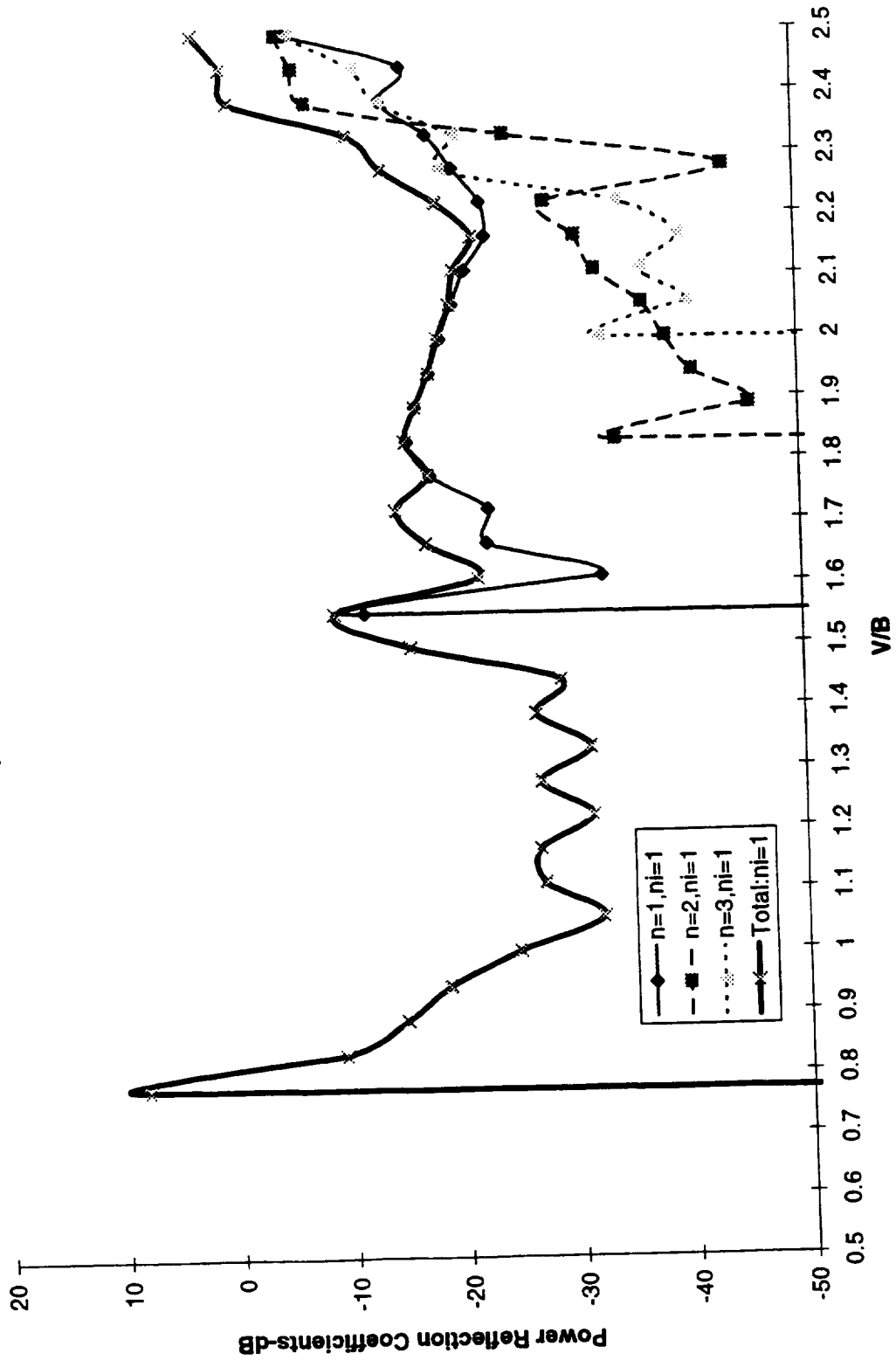
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $sl=3, kl=2, ni=1$

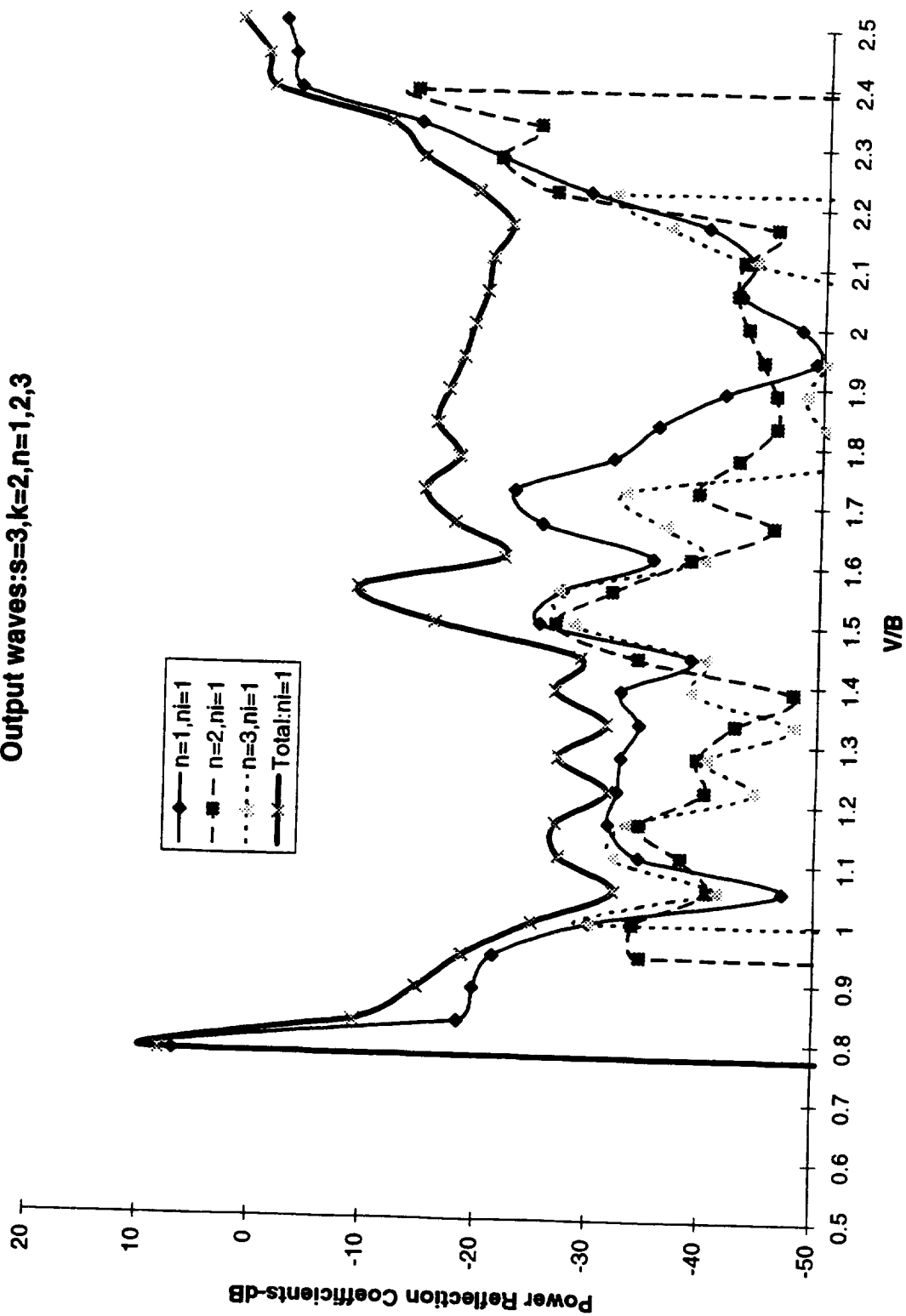
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=1$

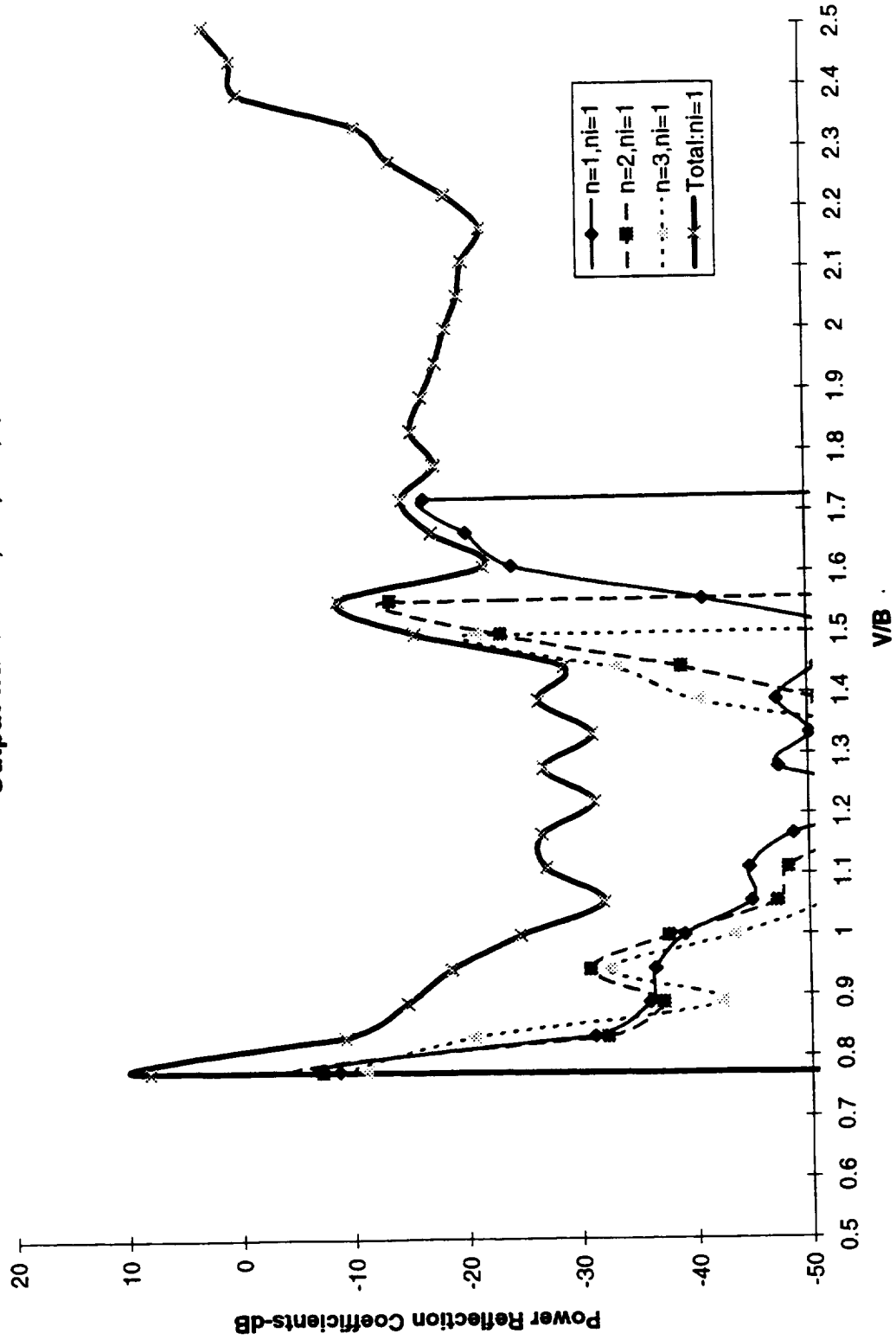
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_l=3, k_l=2, n_l=1$

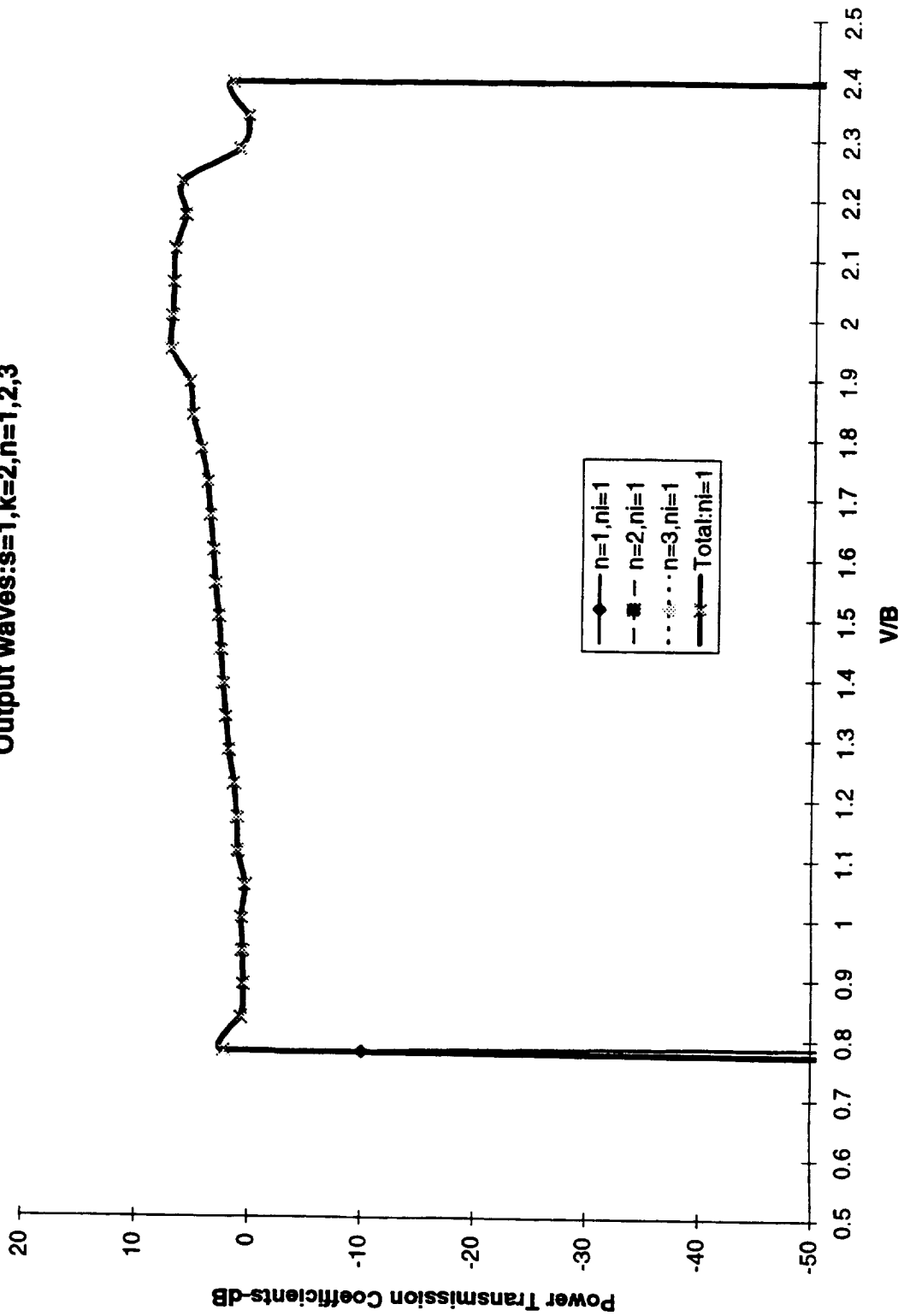
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=1$

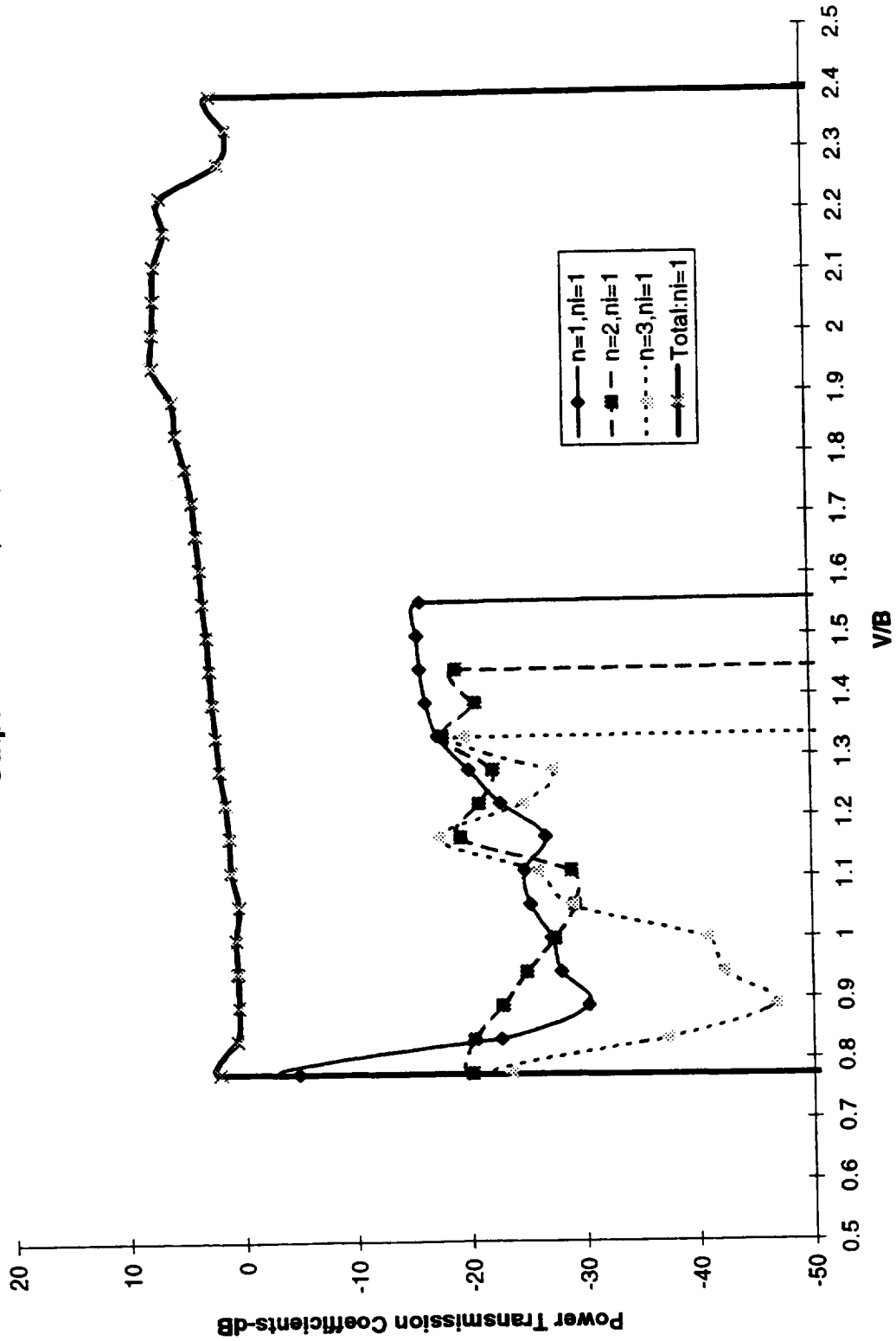
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=1$

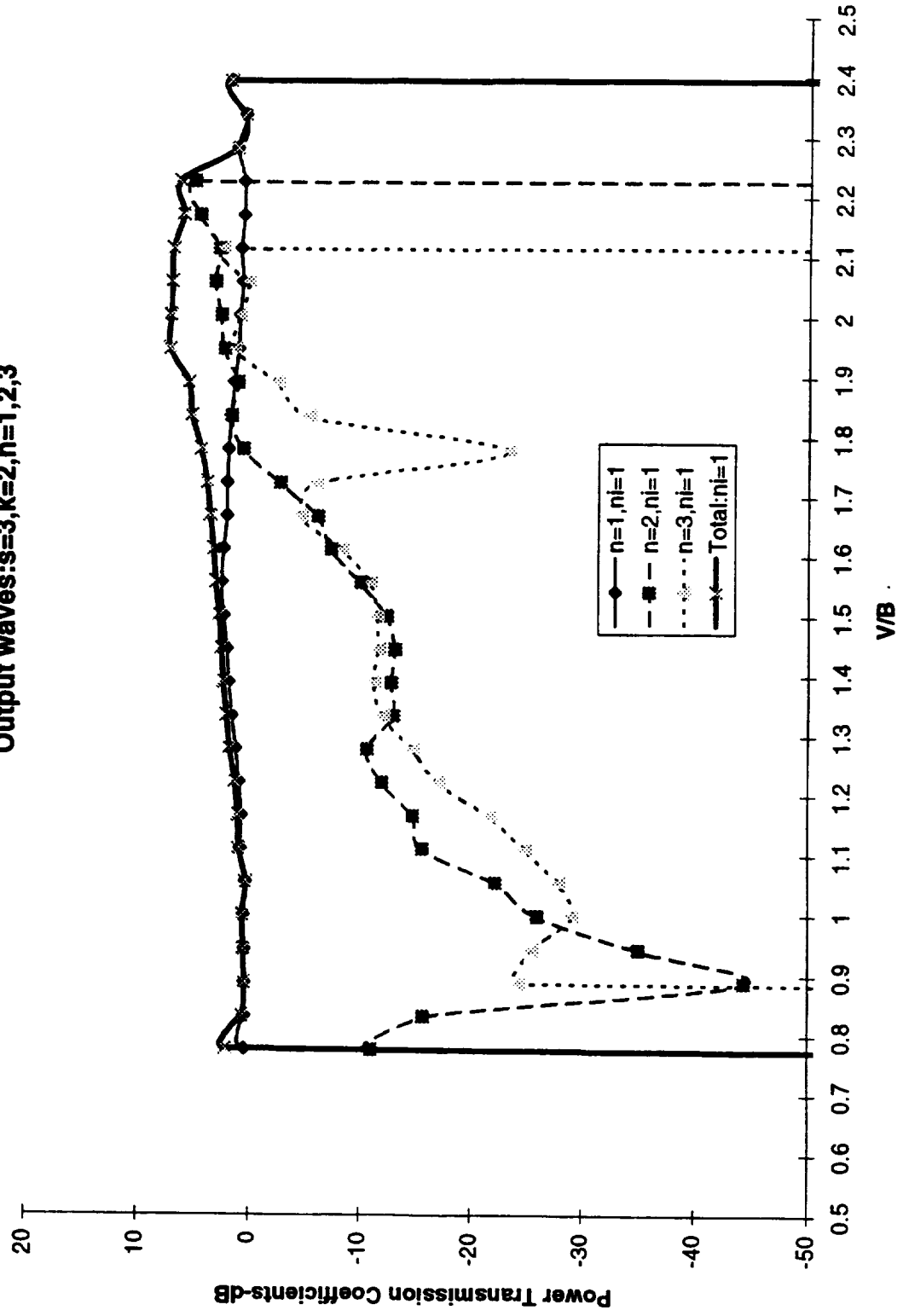
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=3, k_l=2, n_l=1$

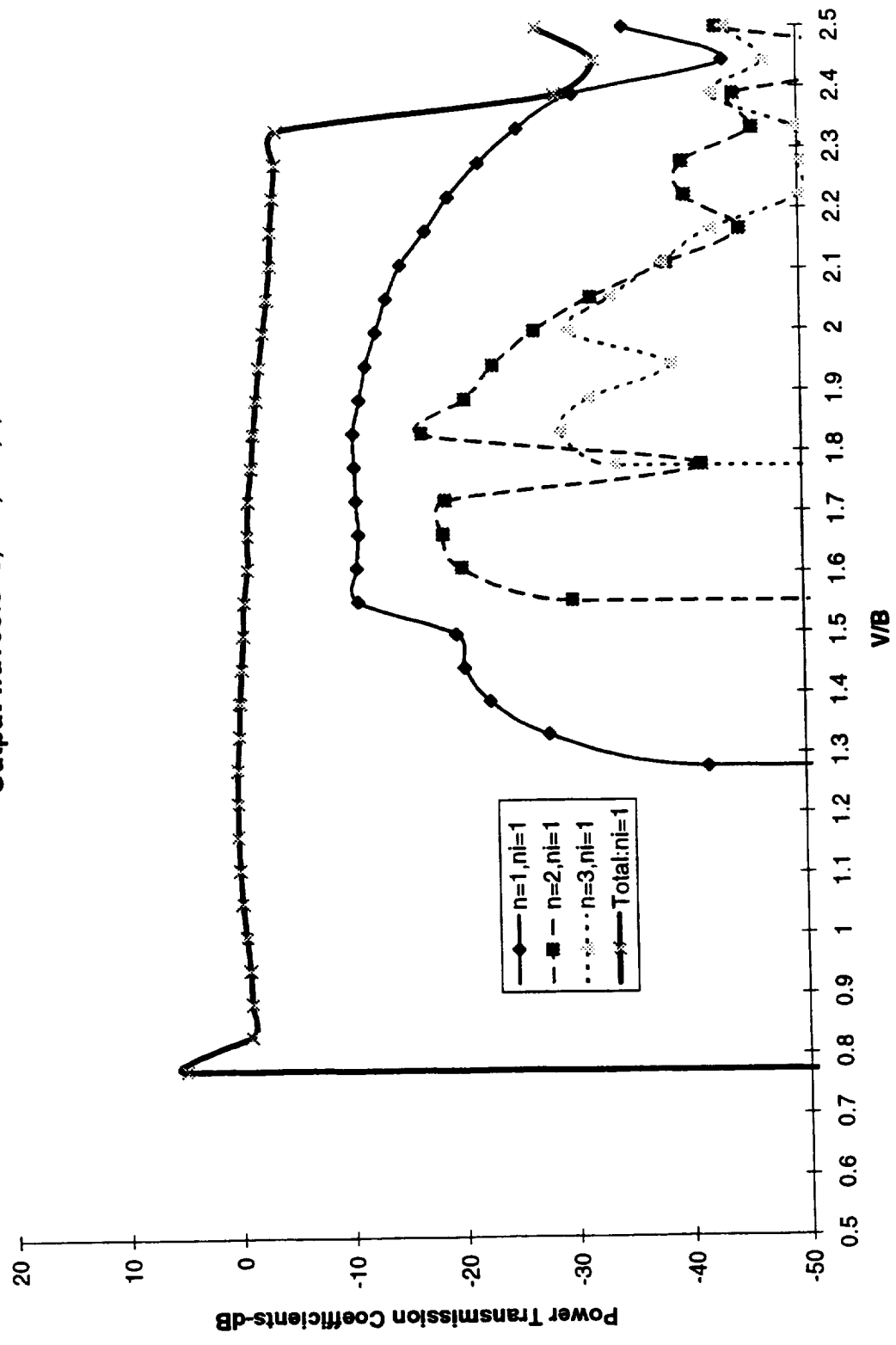
Output waves: $s=3, k=2, n=1, 2, 3$



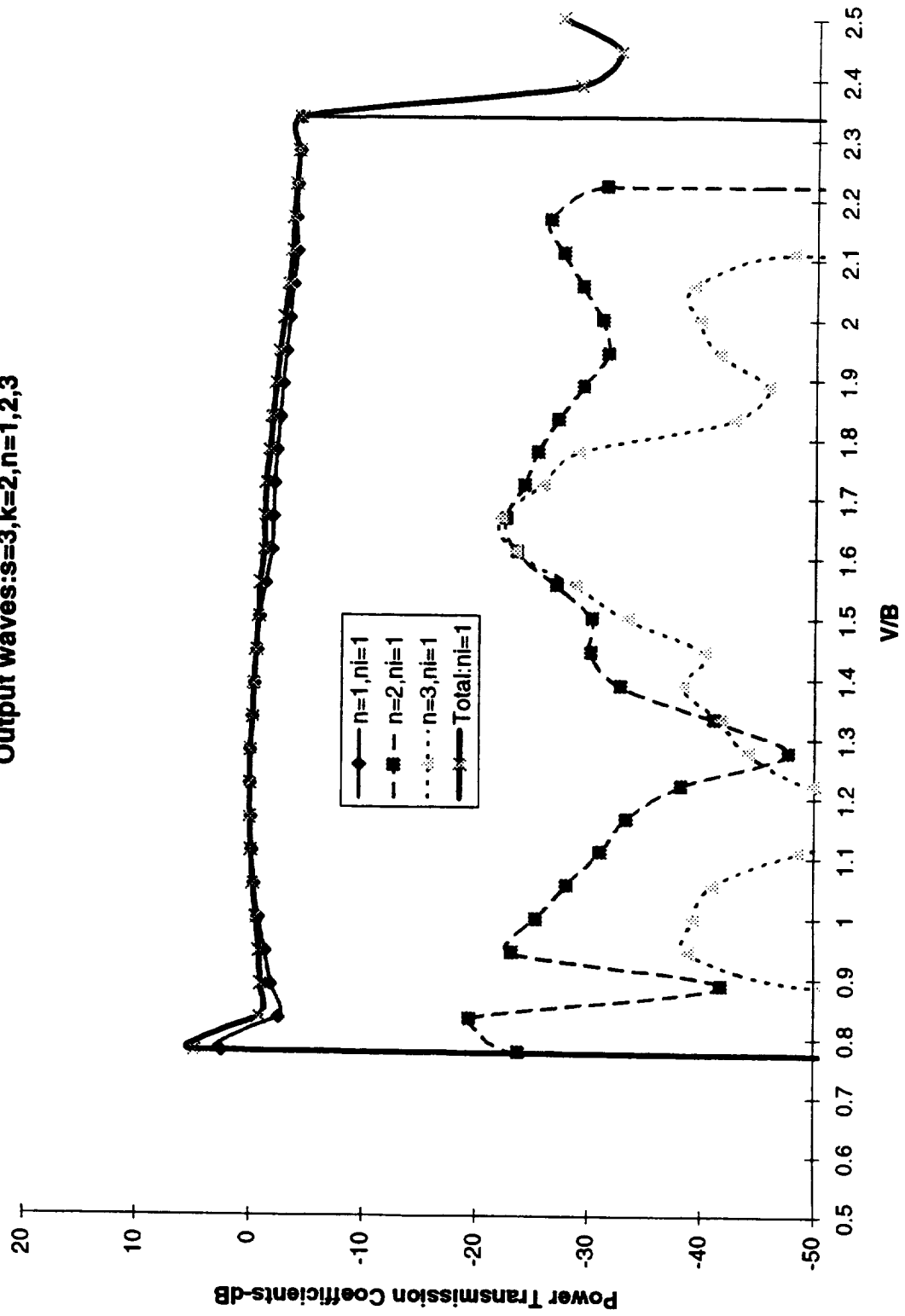
Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=1$

Output waves: $s=3, k=1, n=1, 2, 3$



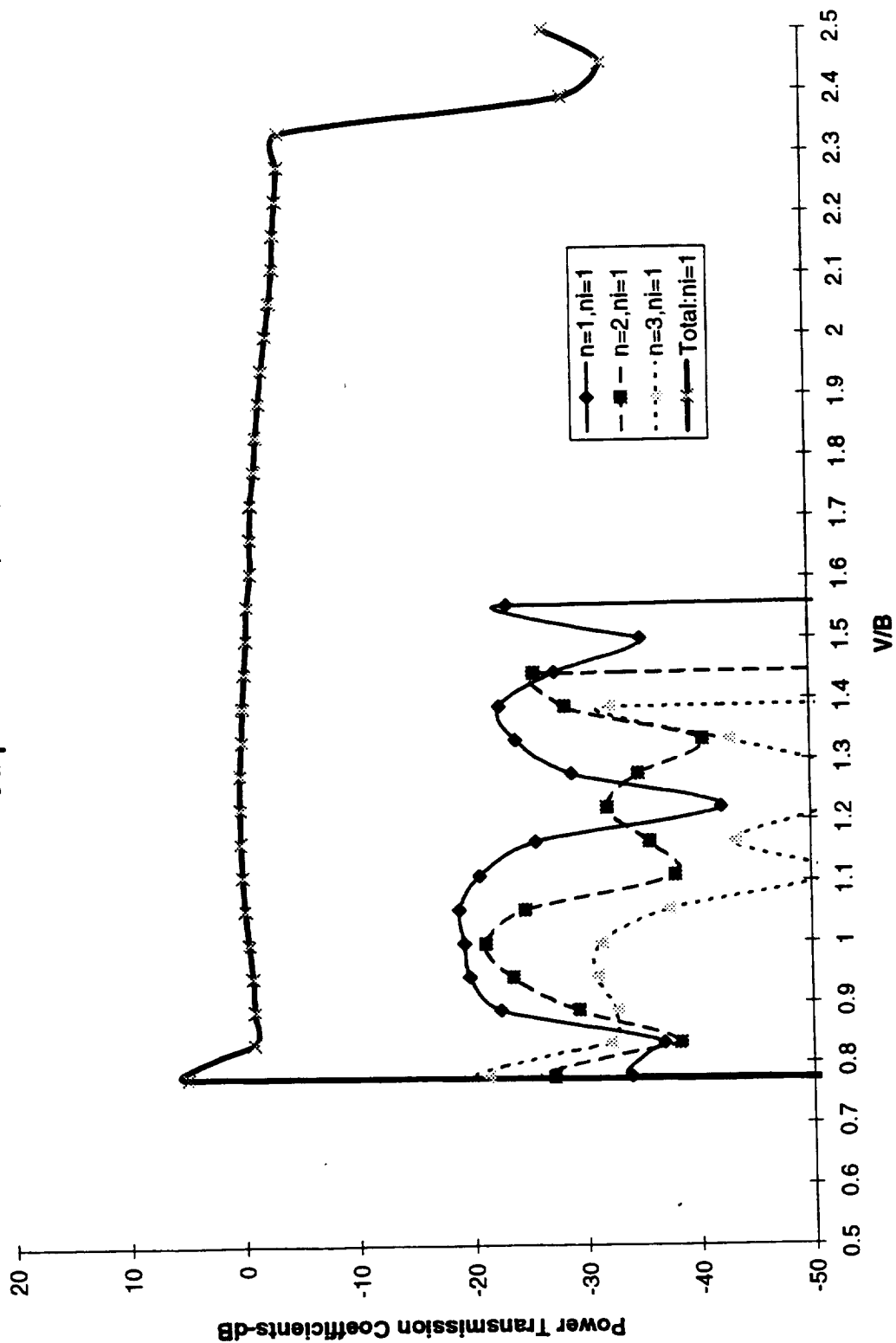
Stator Transmission-Mid Speed Case
Input wave: $s_i=3, k_i=2, n_i=1$
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_l=3, k_l=2, n_l=1$

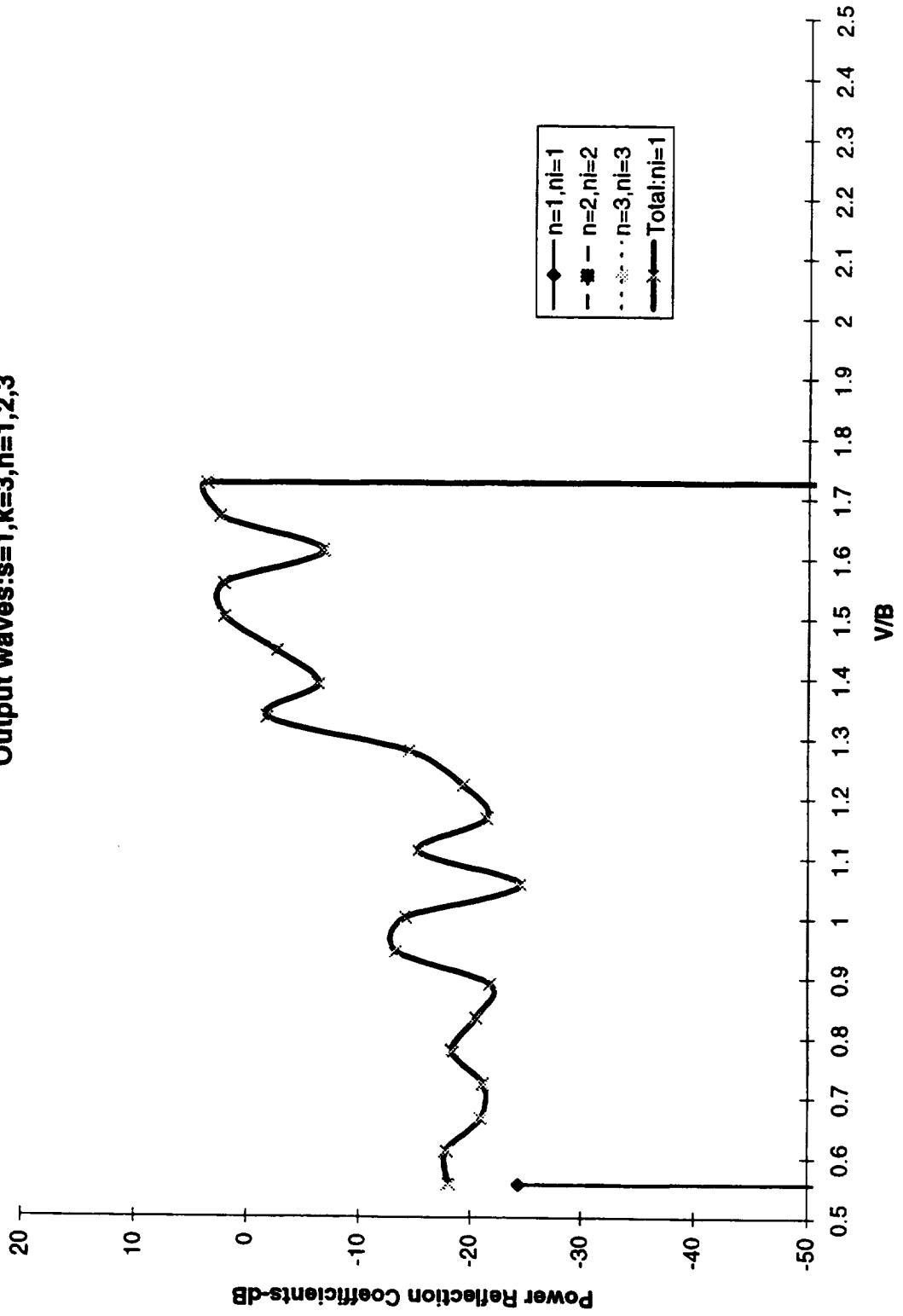
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=1$

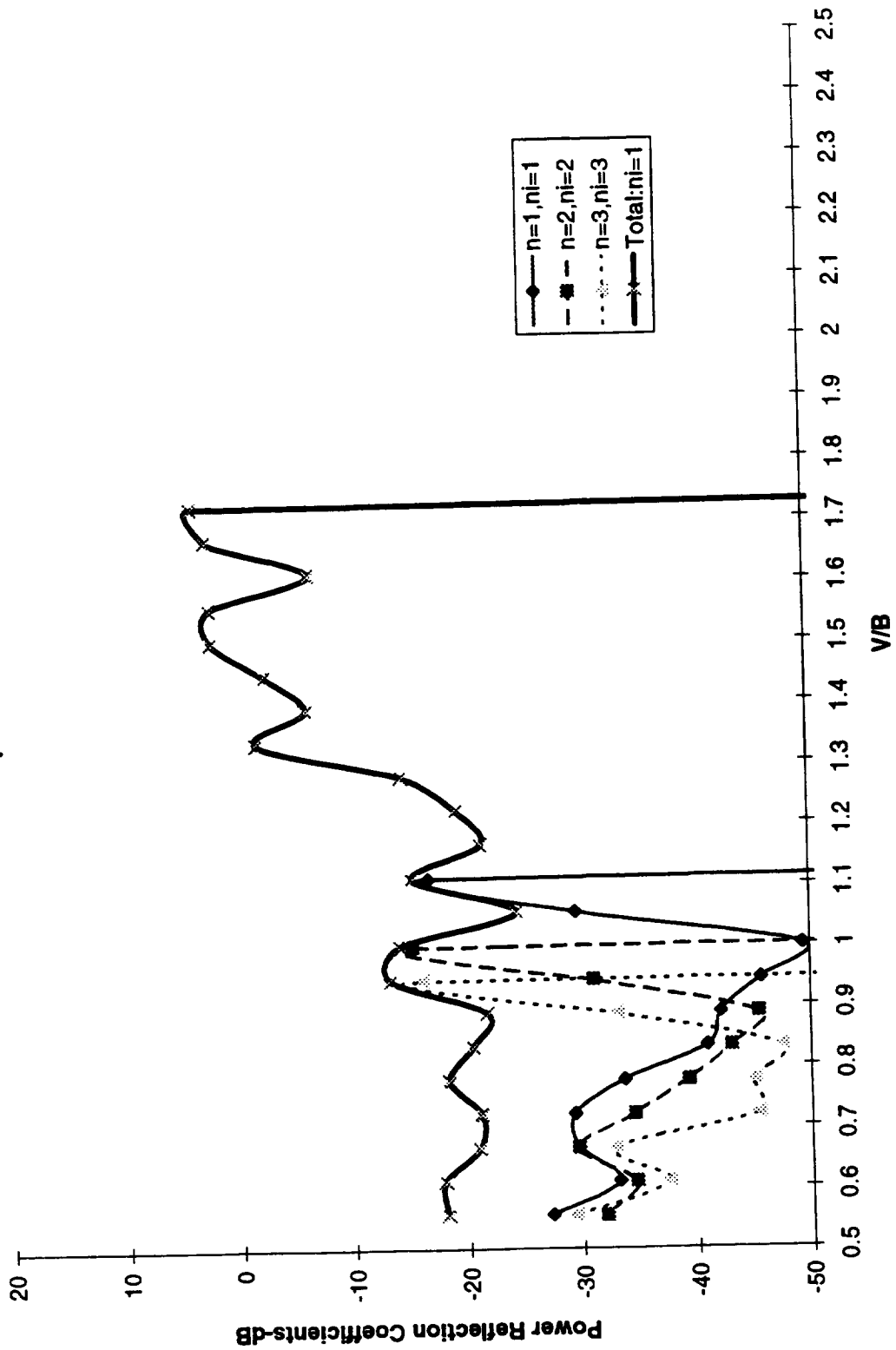
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=1$

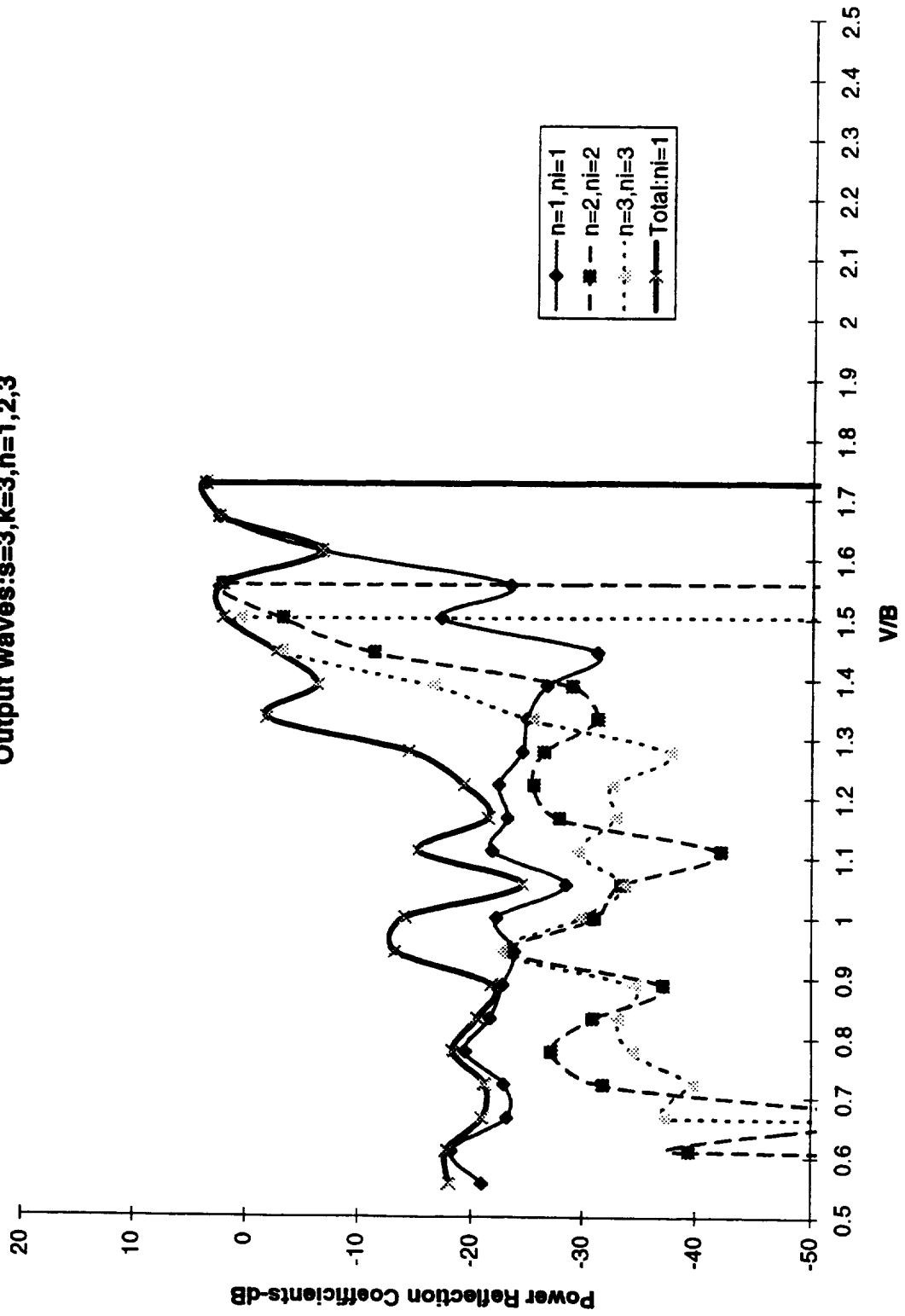
Output wave: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=3, k_i=3, n_i=1$

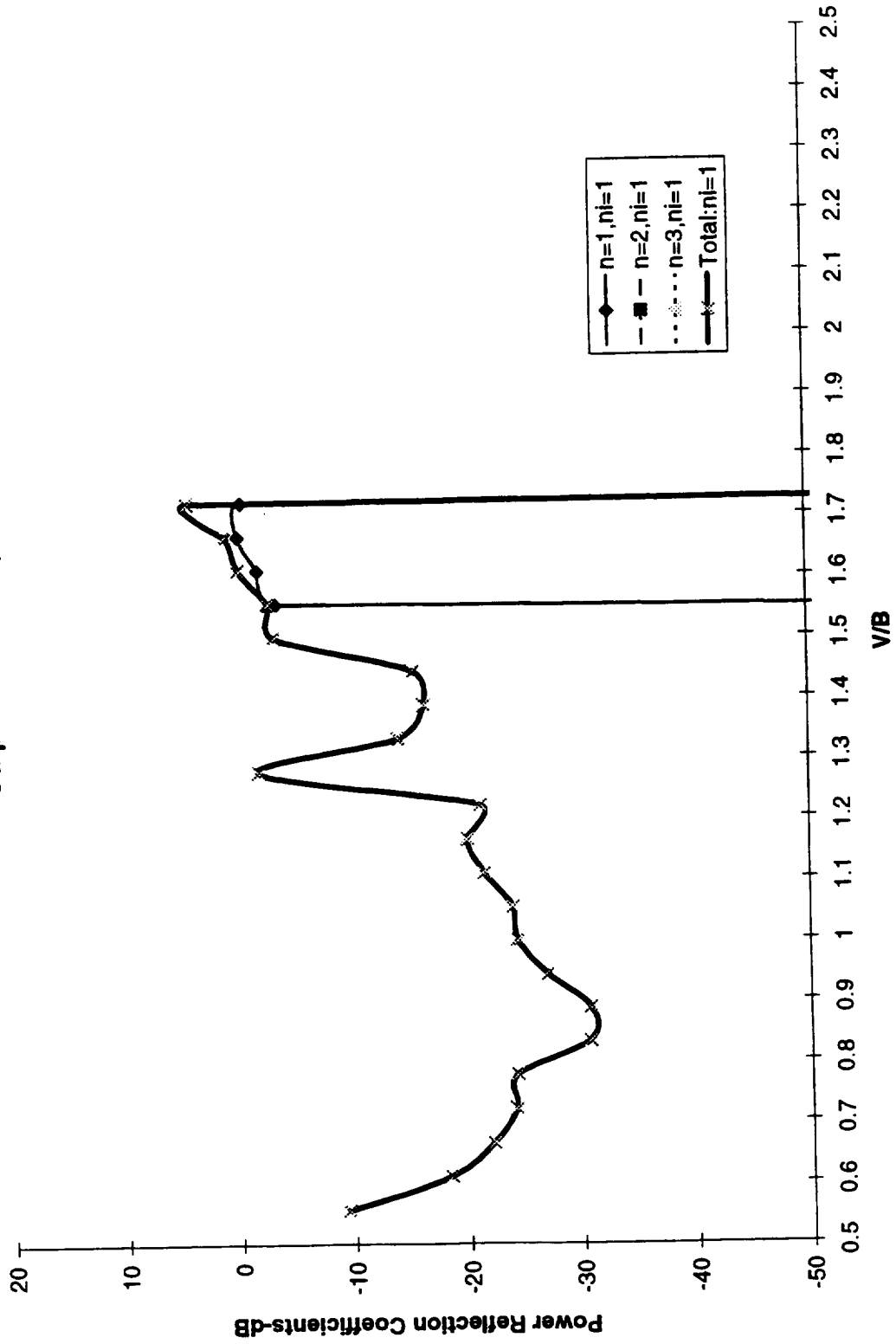
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=1$

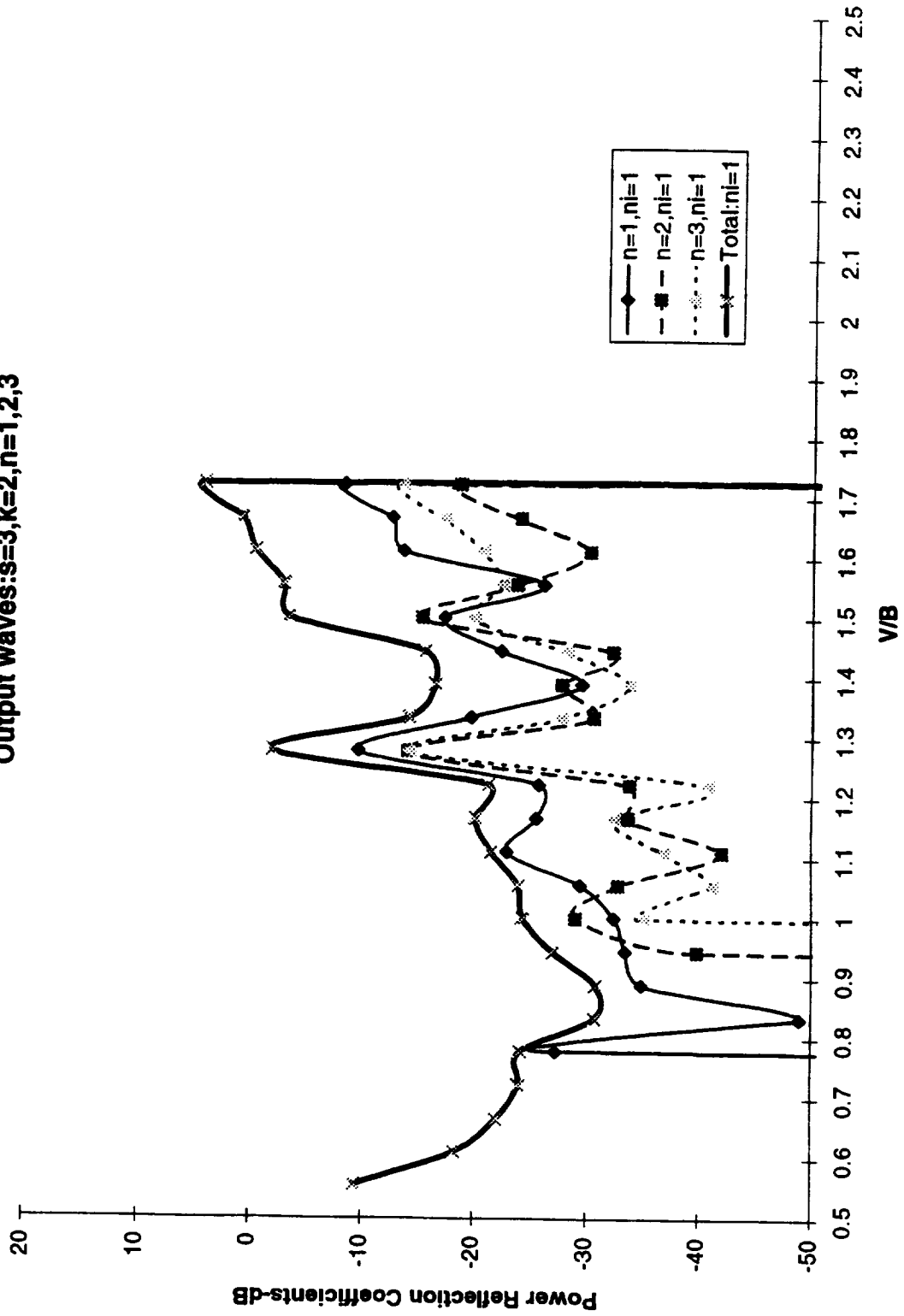
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_l=3, k_l=3, n_l=1$

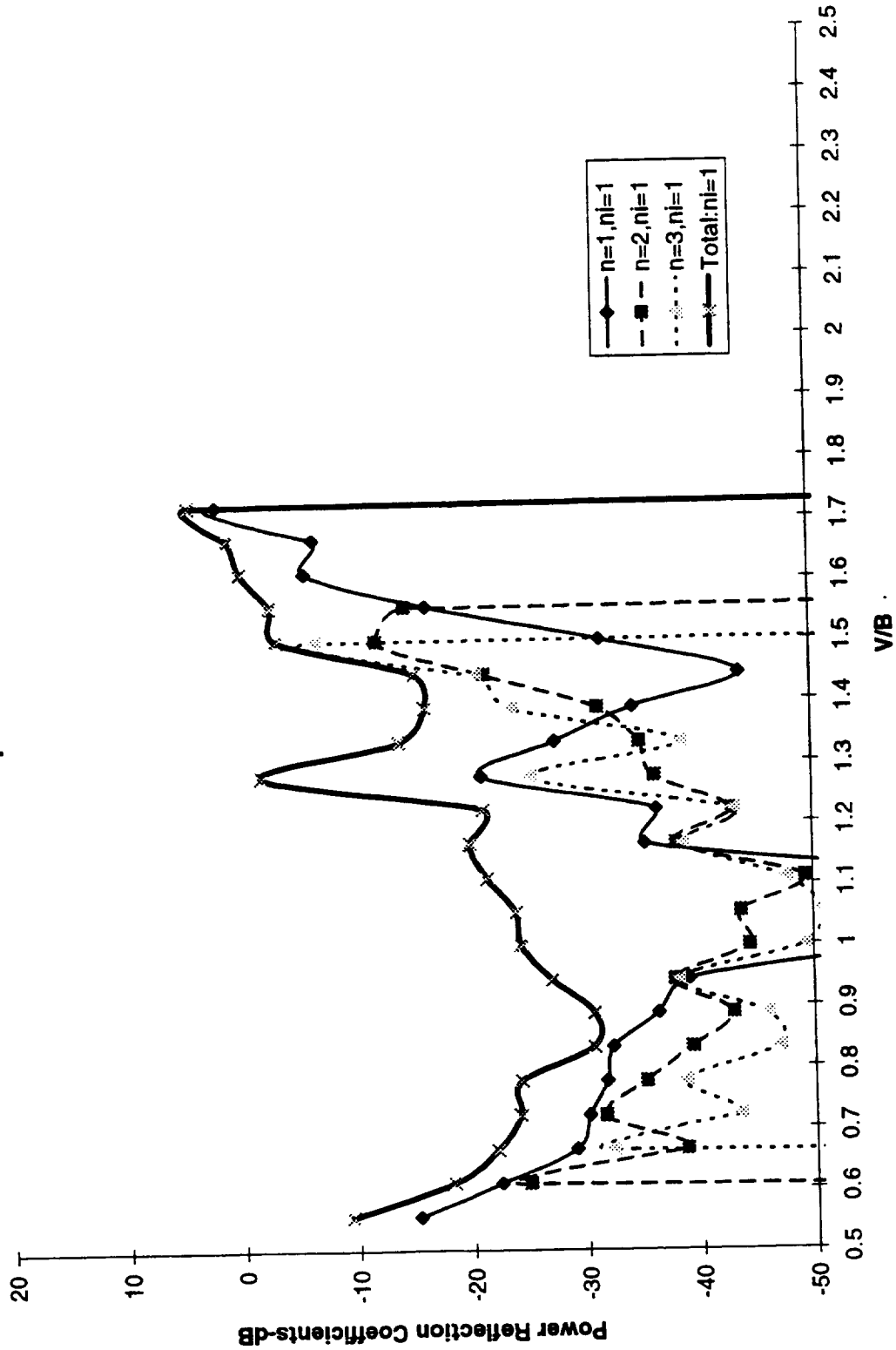
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=1$

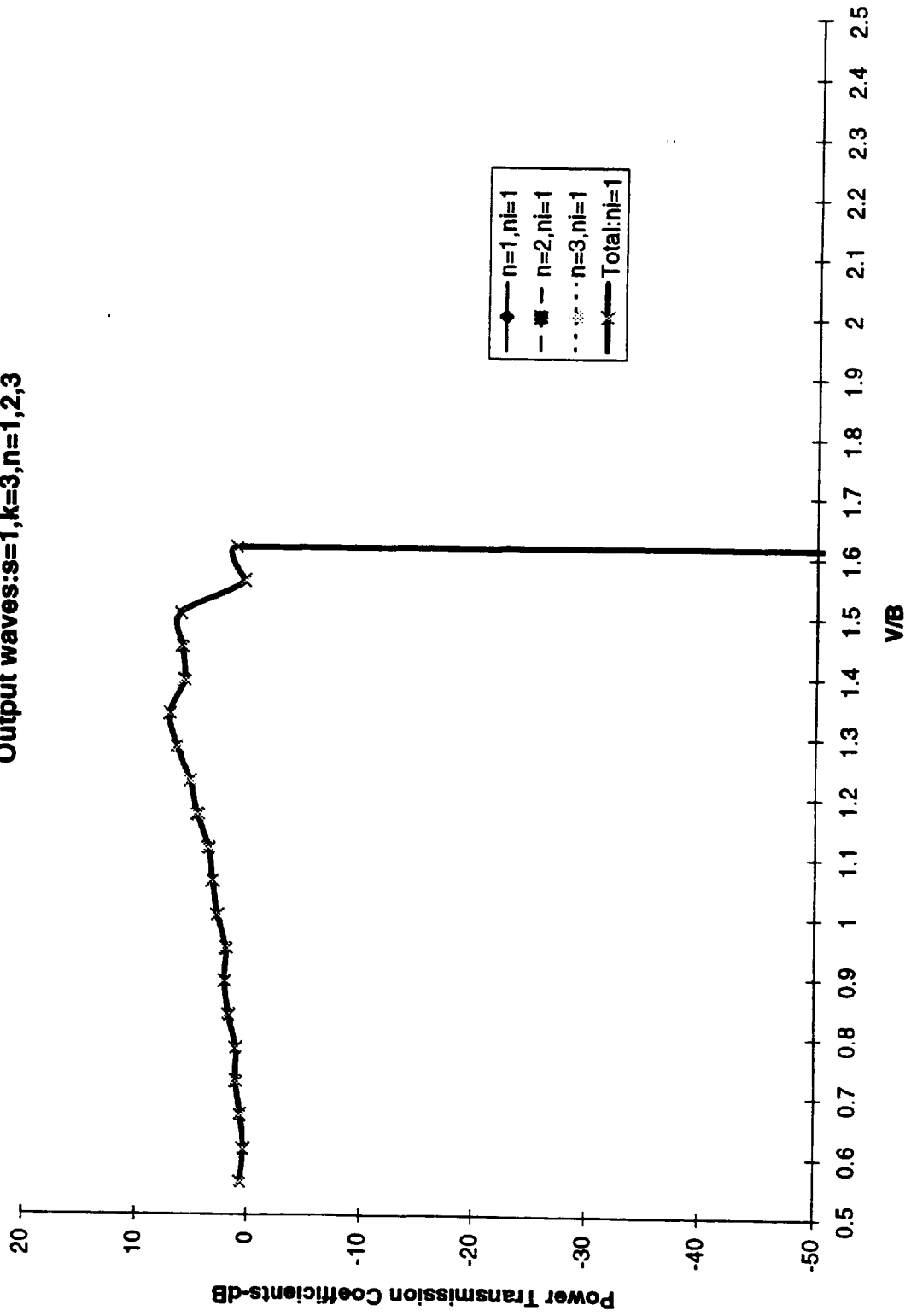
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=1$

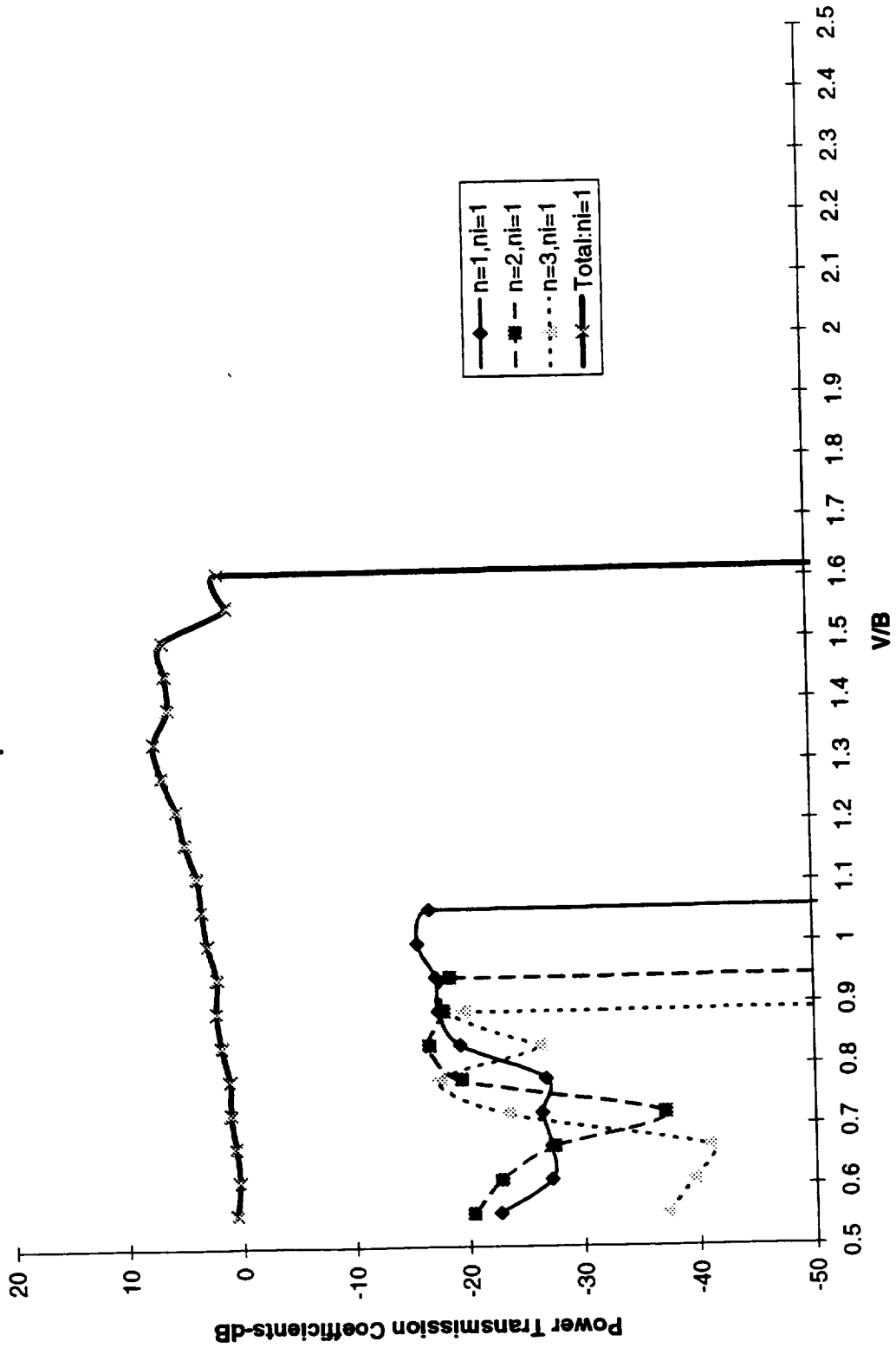
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=1$

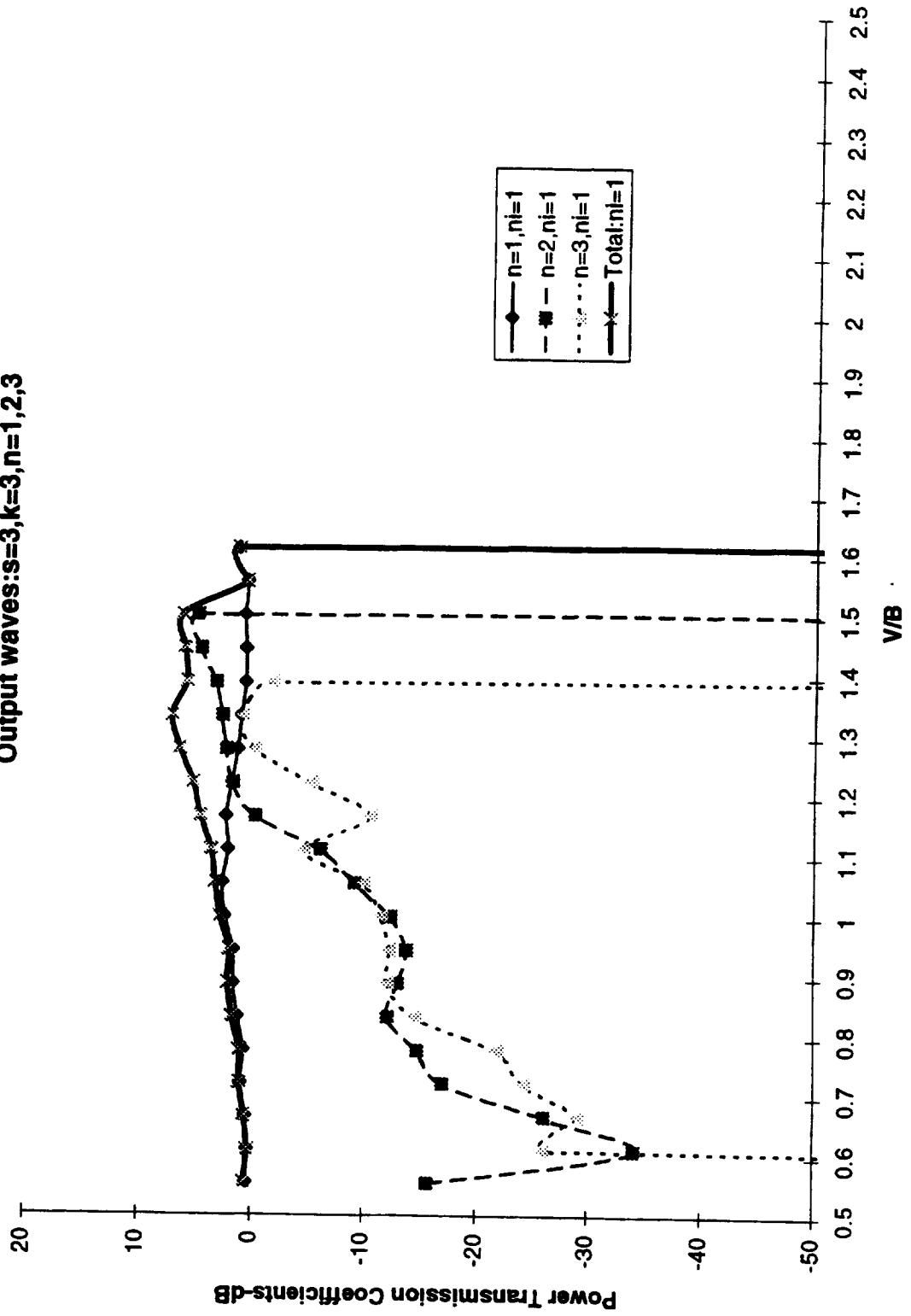
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=1$

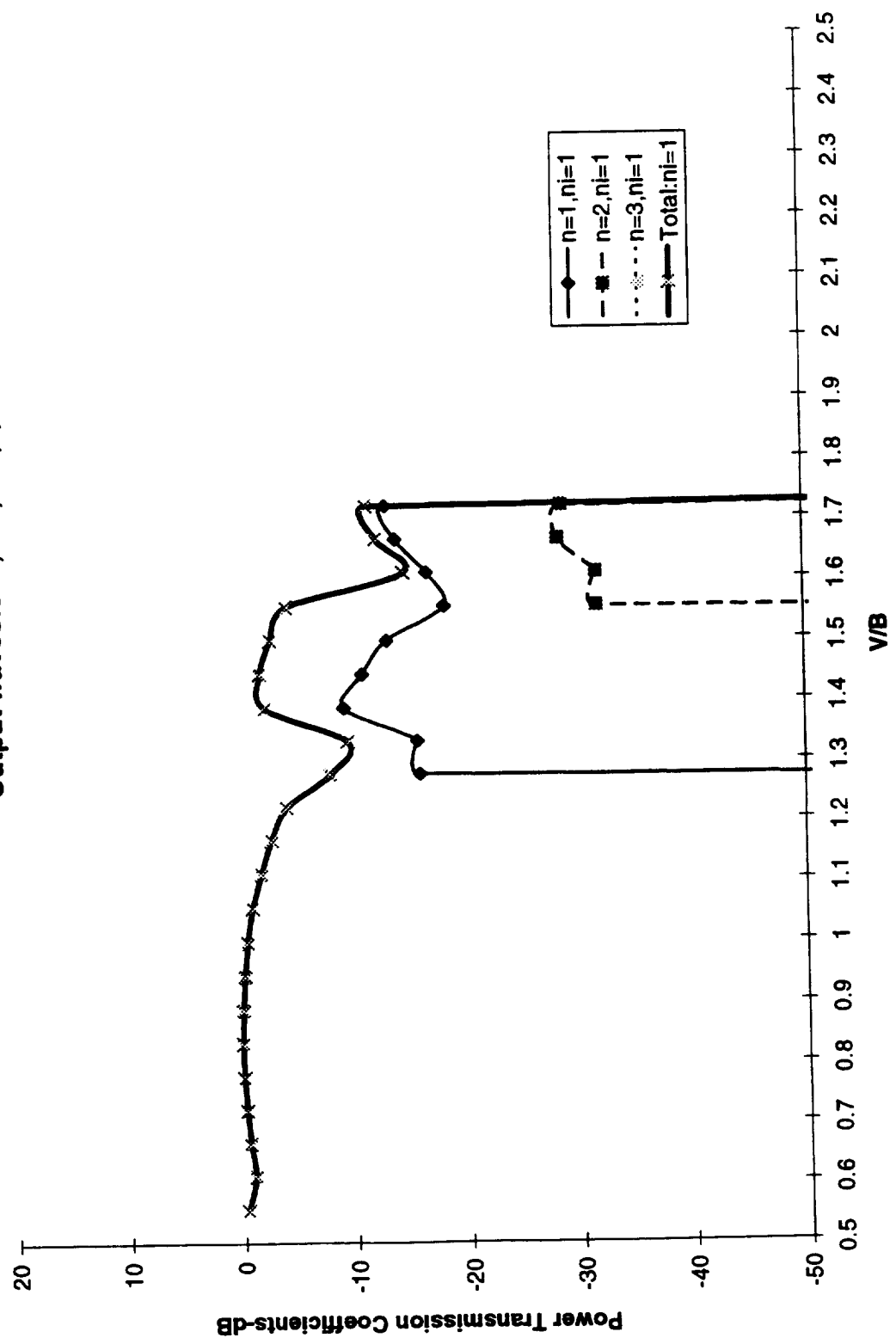
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=1$

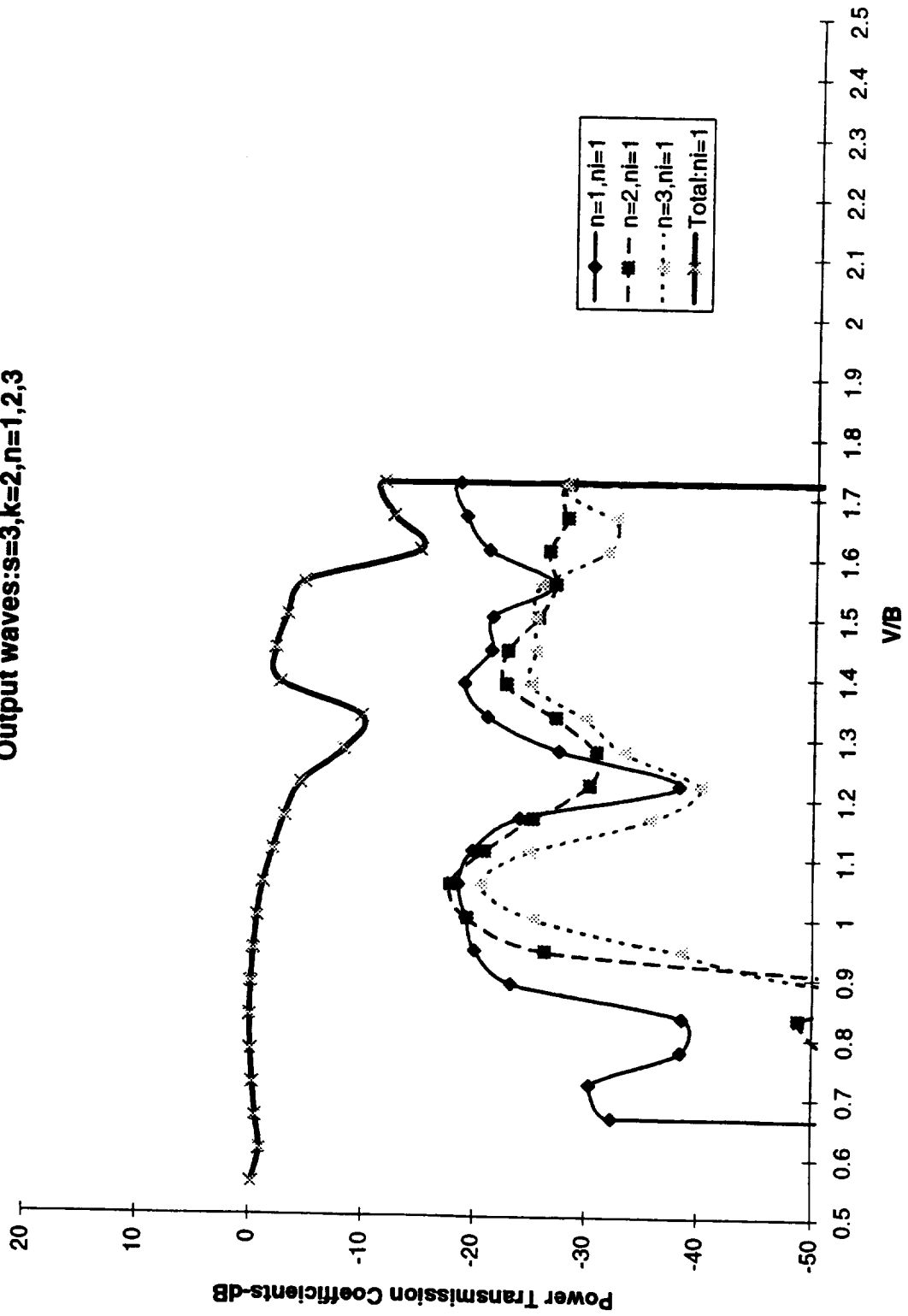
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=1$

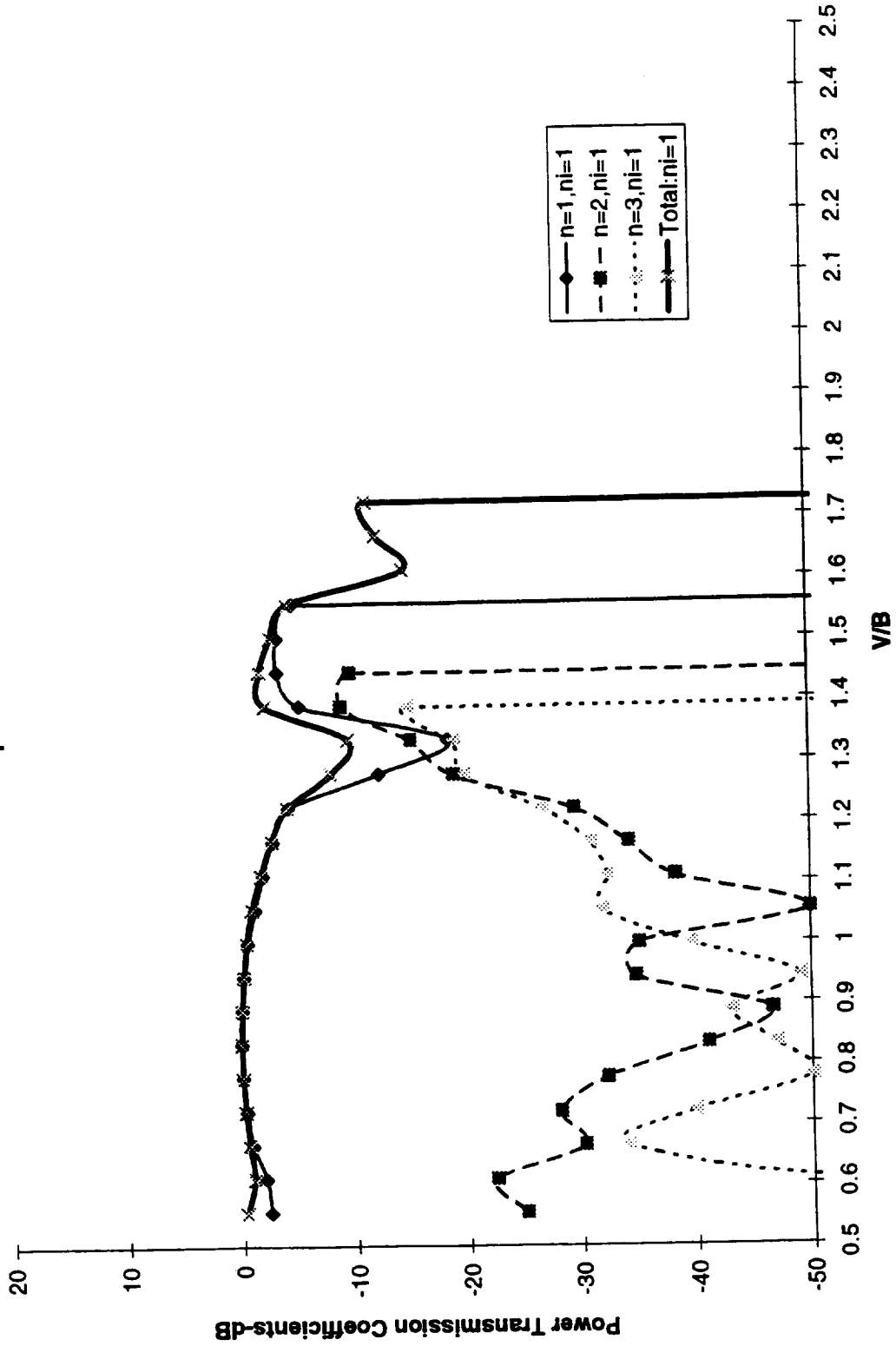
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $sl=3, ki=3, ni=1$

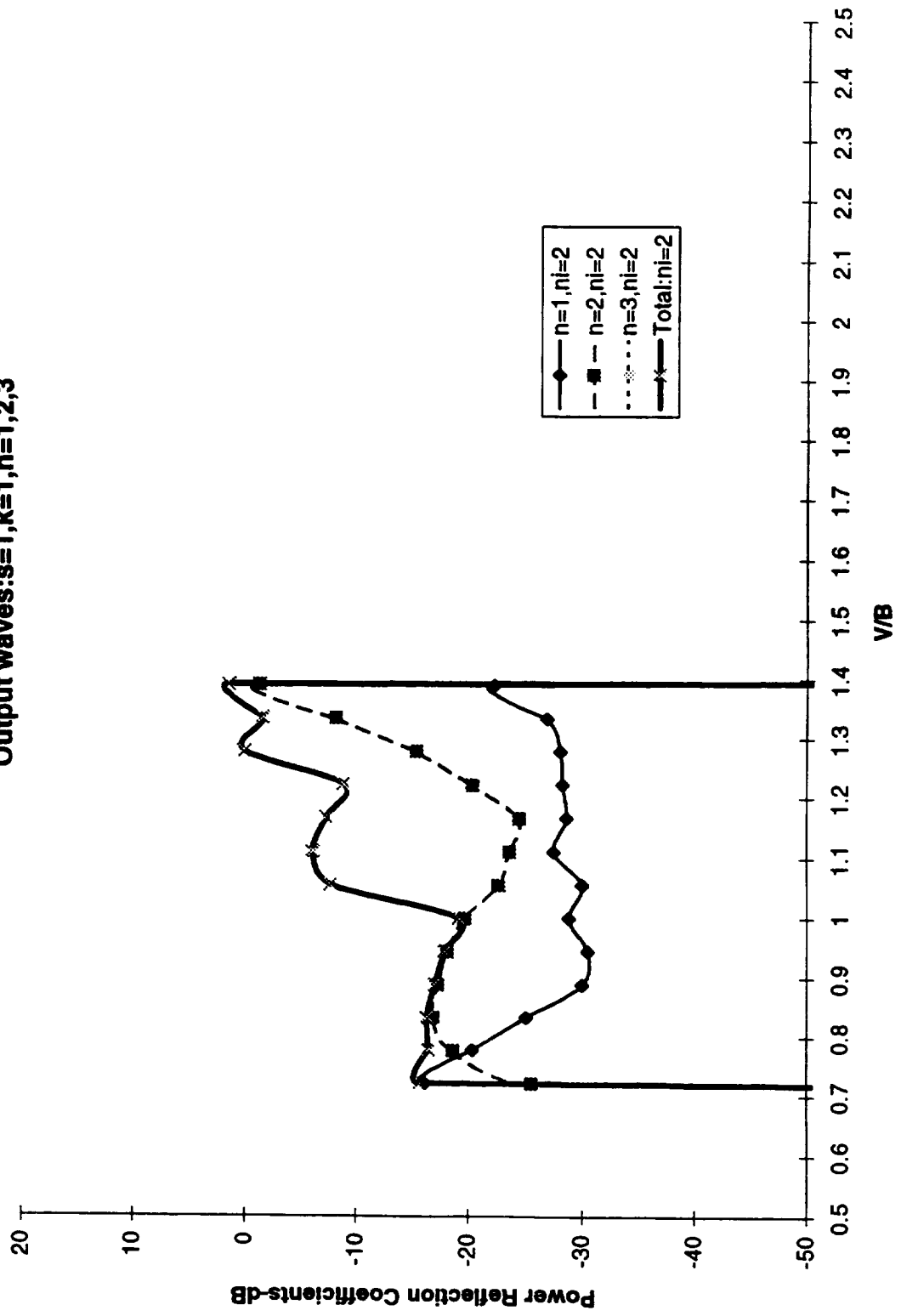
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

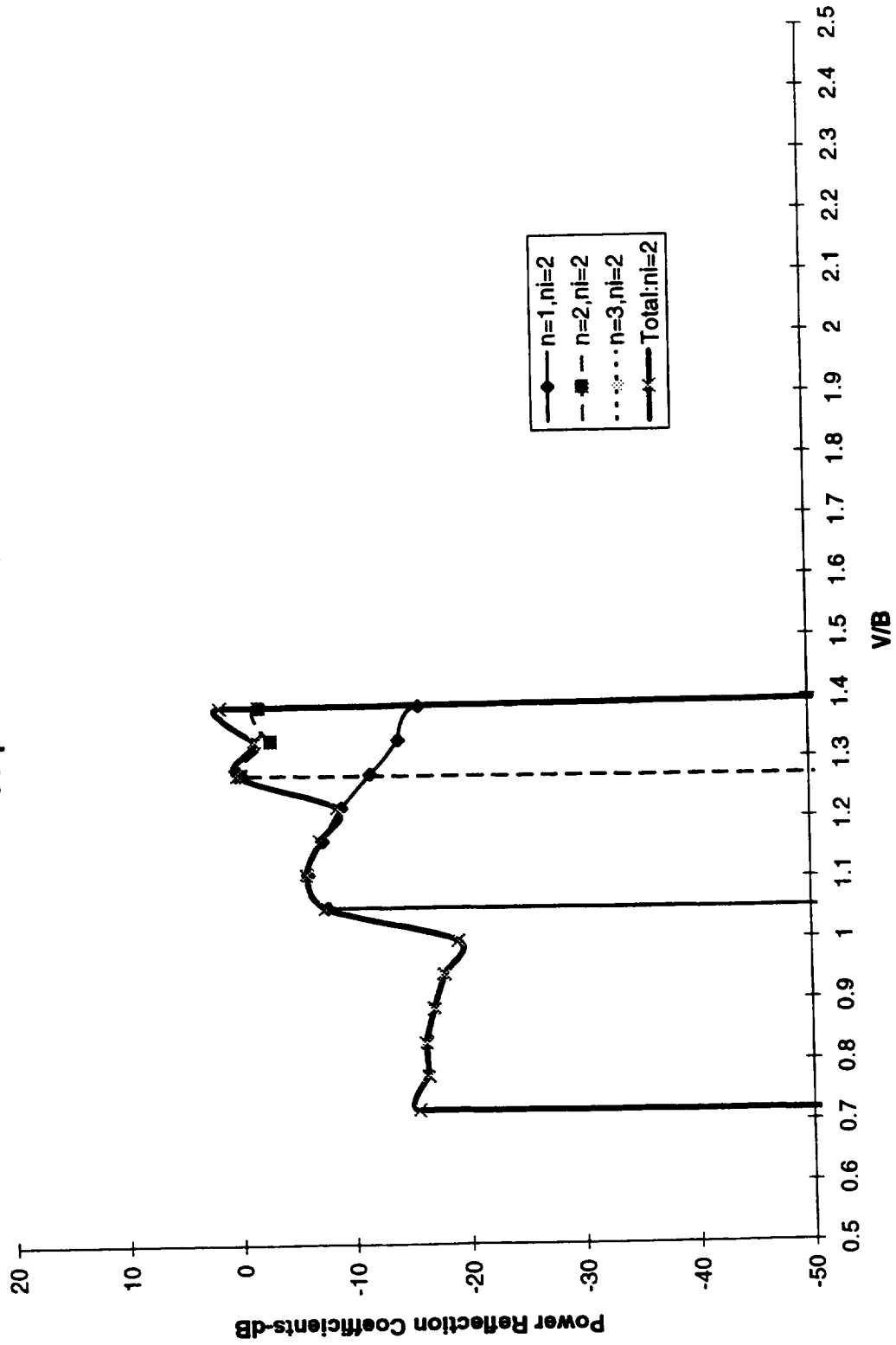
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=1, k_l=1, n_l=2$

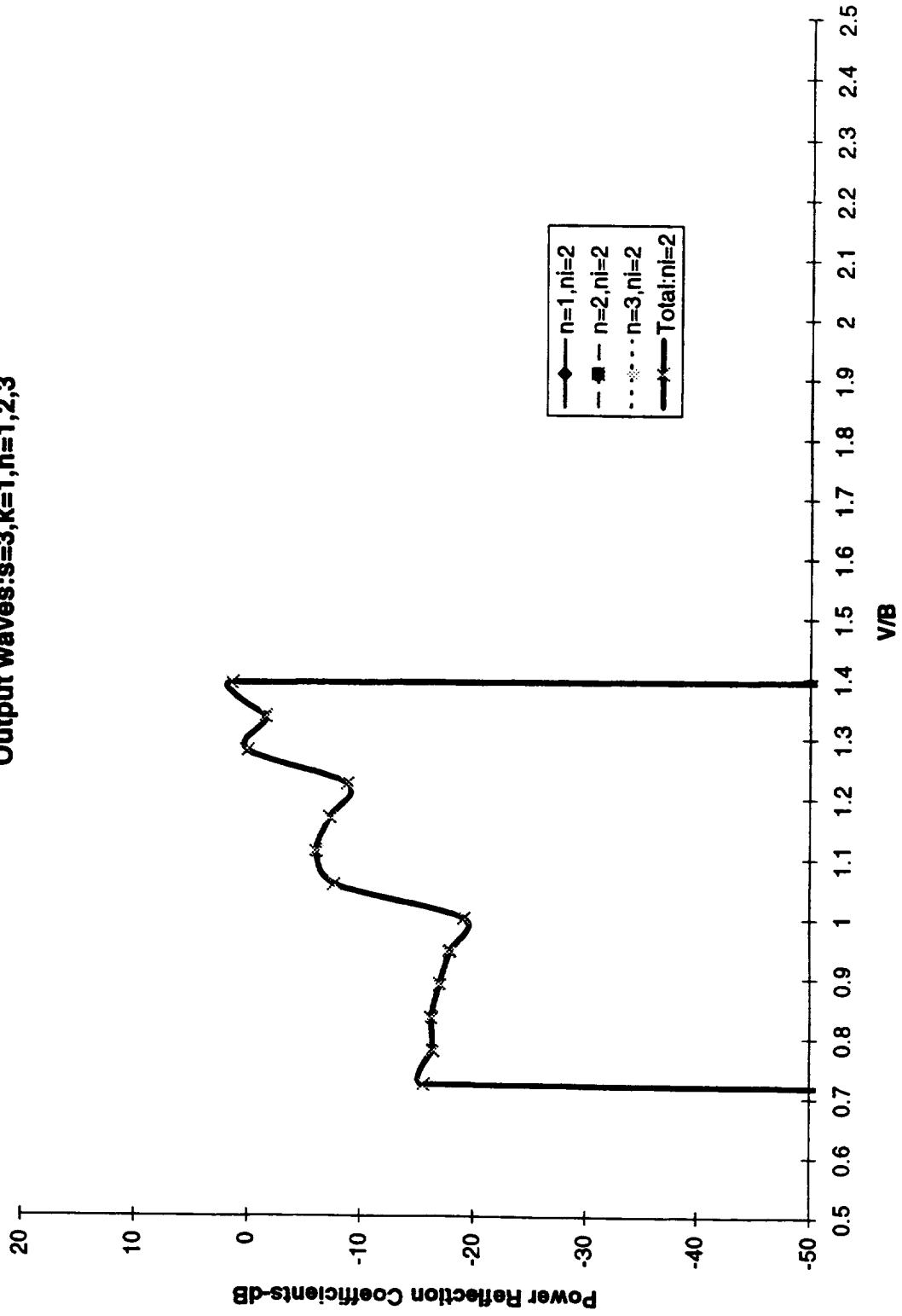
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

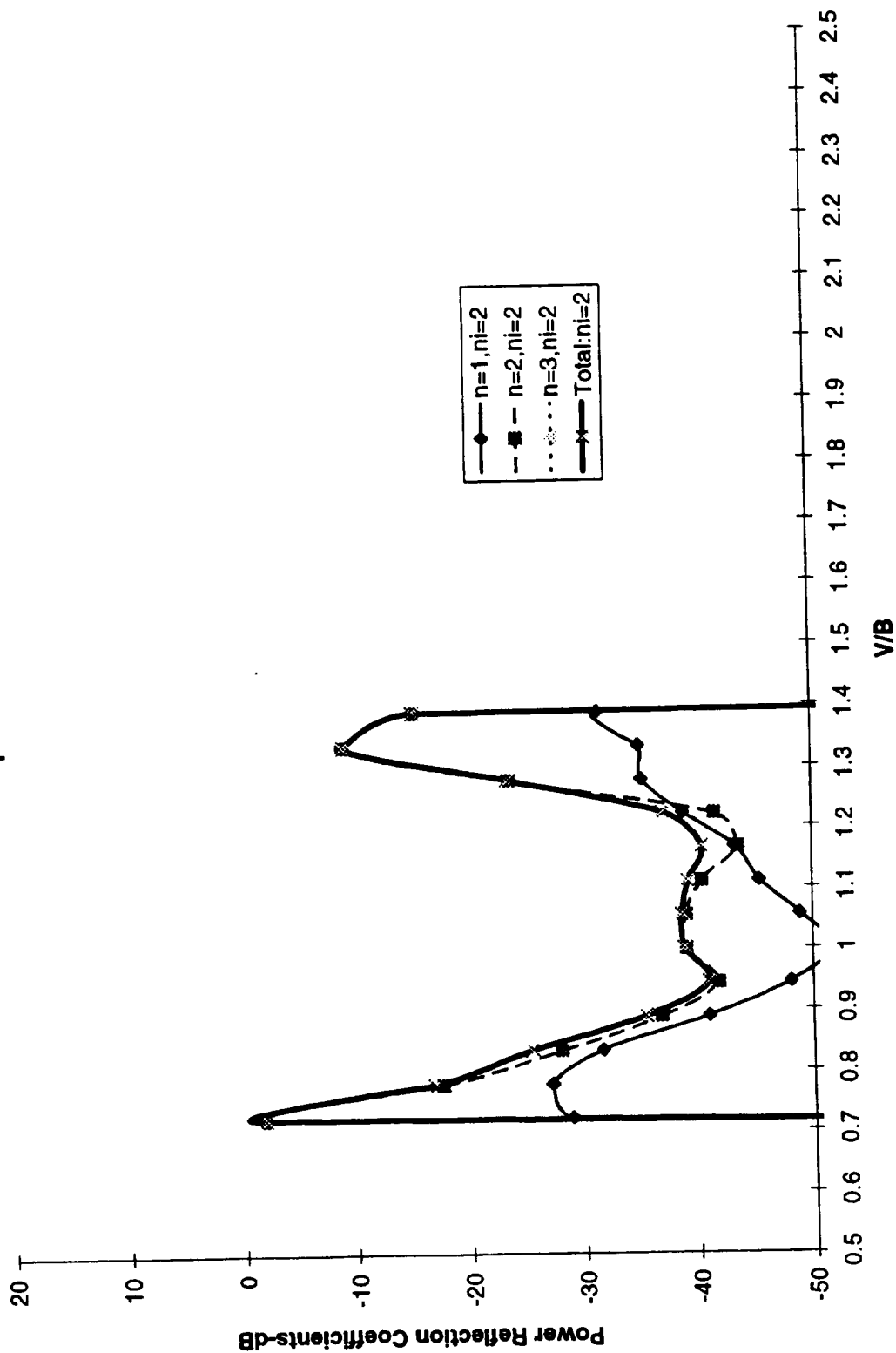
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

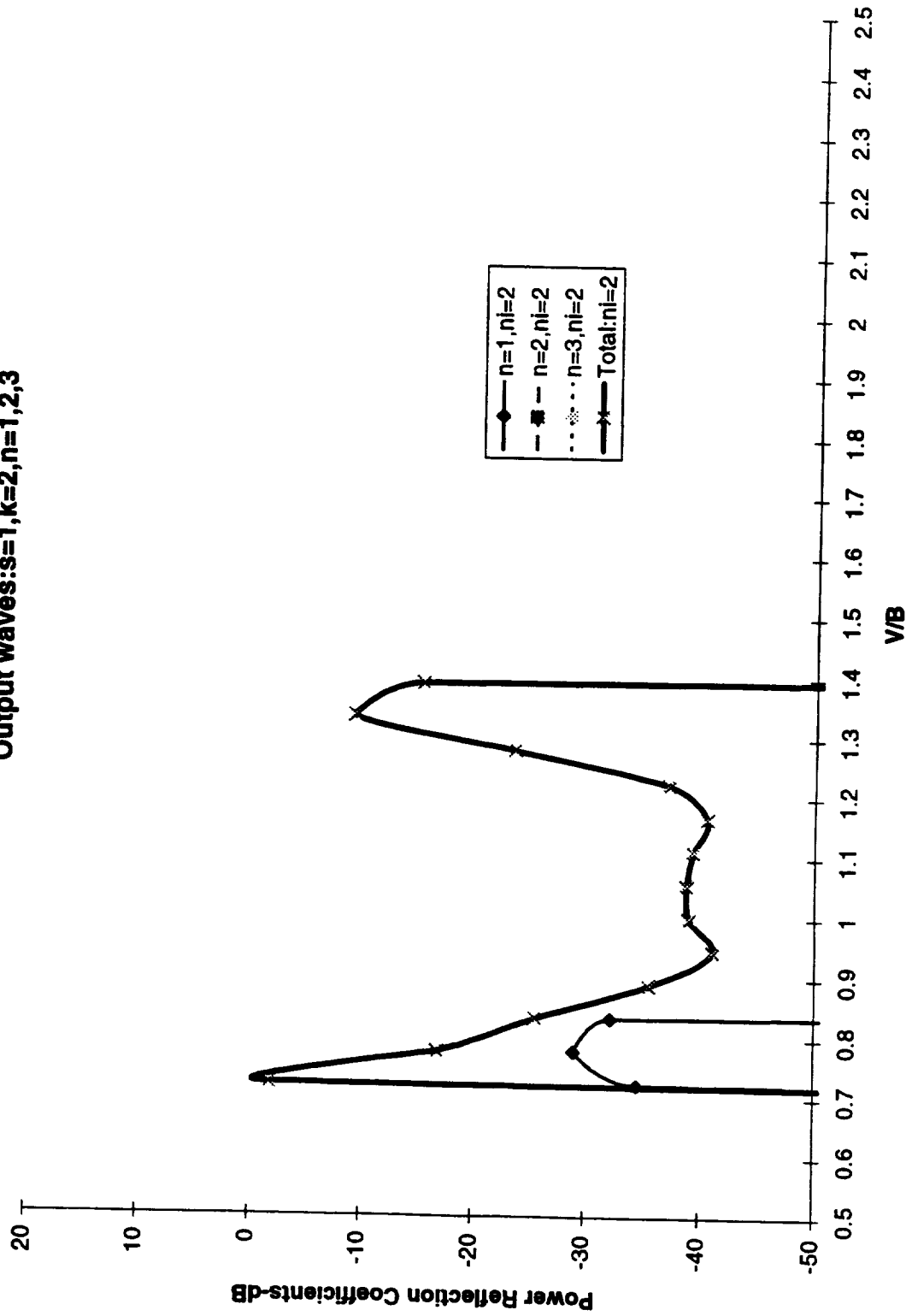
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_l=1, k_l=1, n_l=2$

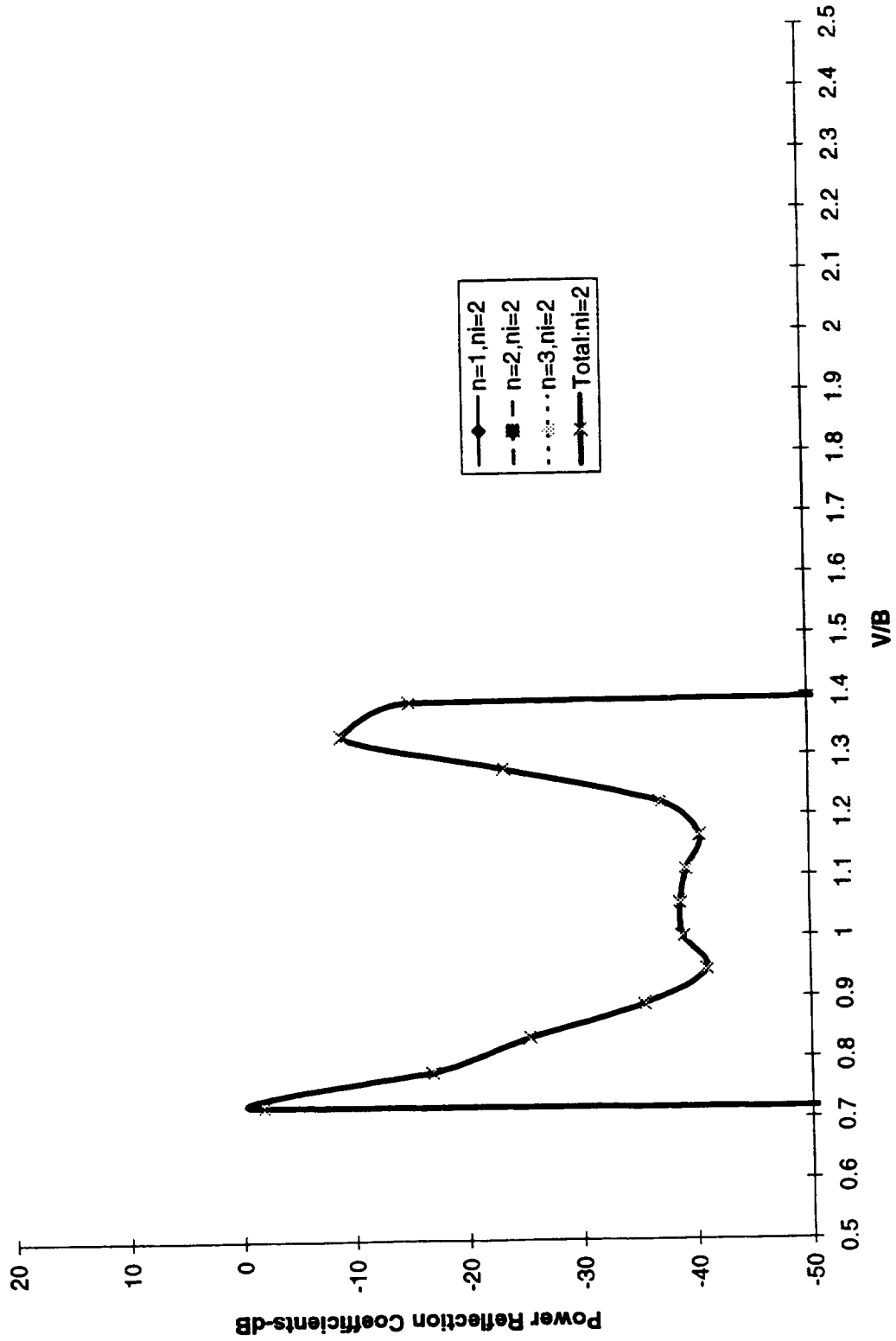
Output waves: $s=1, k=2, n=1, 2, 3$



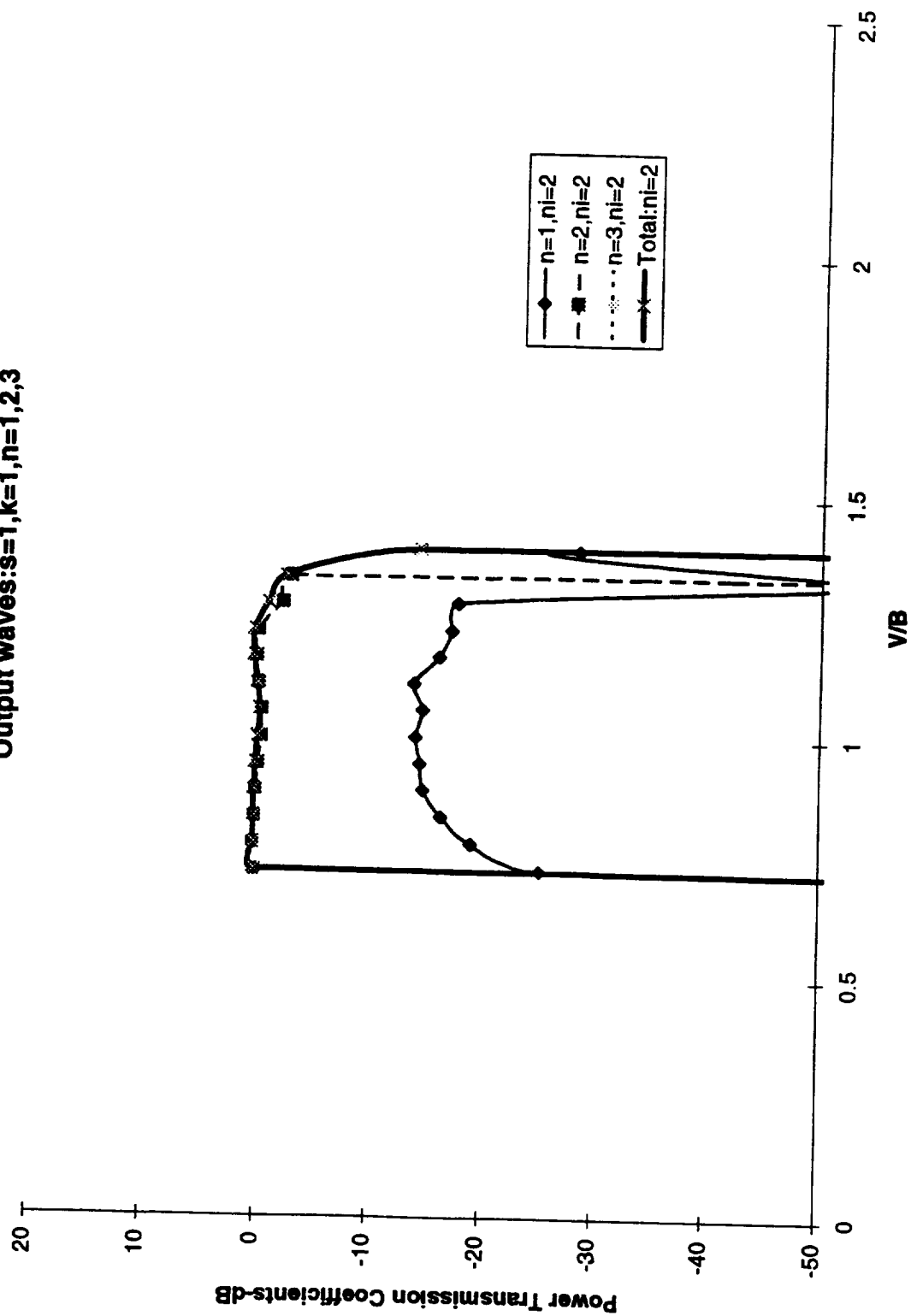
Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

Output waves: $s=1, k=3, n=1, 2, 3$



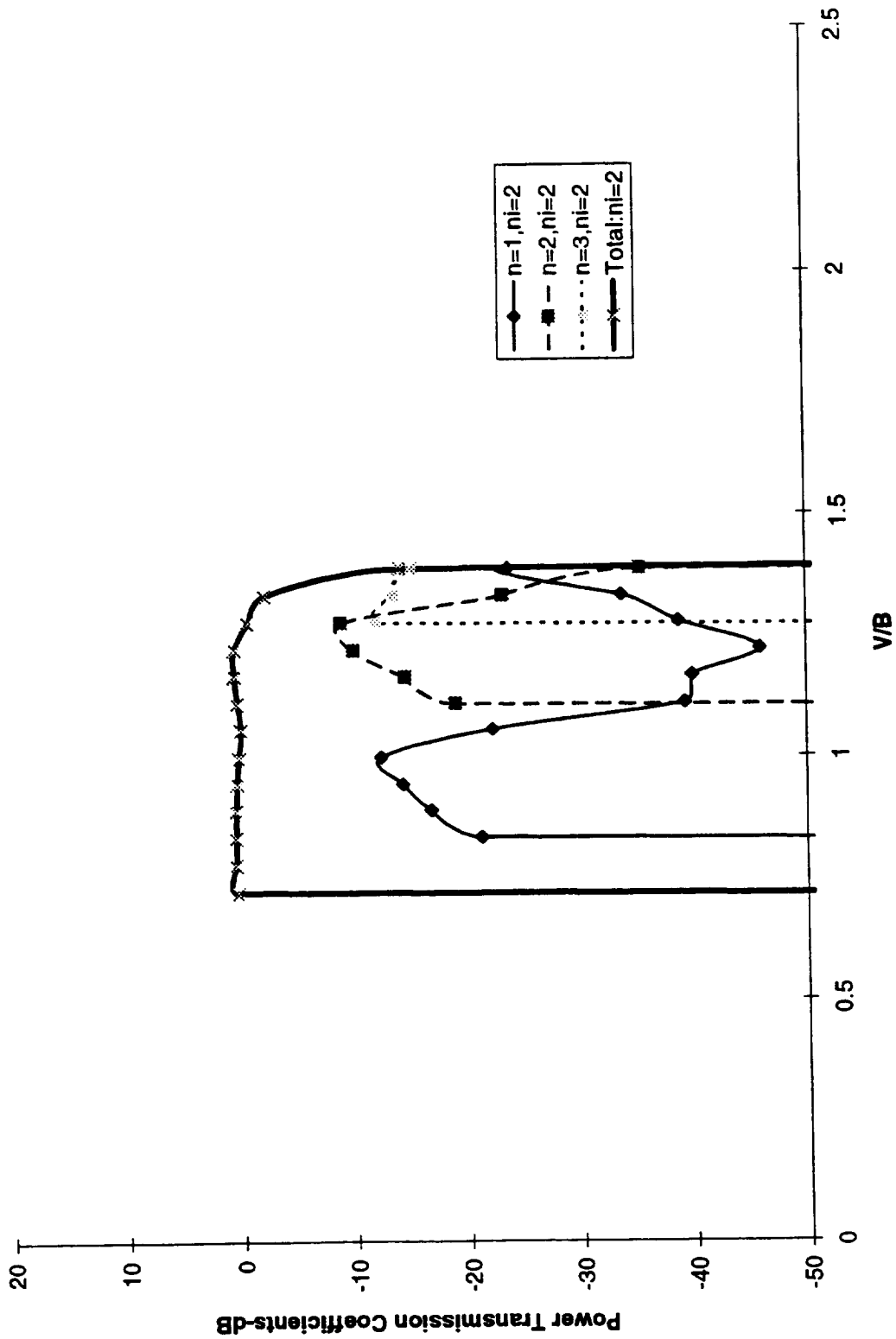
Rotor Transmission-Mid Speed Case
Input wave: $s_i=1, k_i=1, n_i=2$
Output wave: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

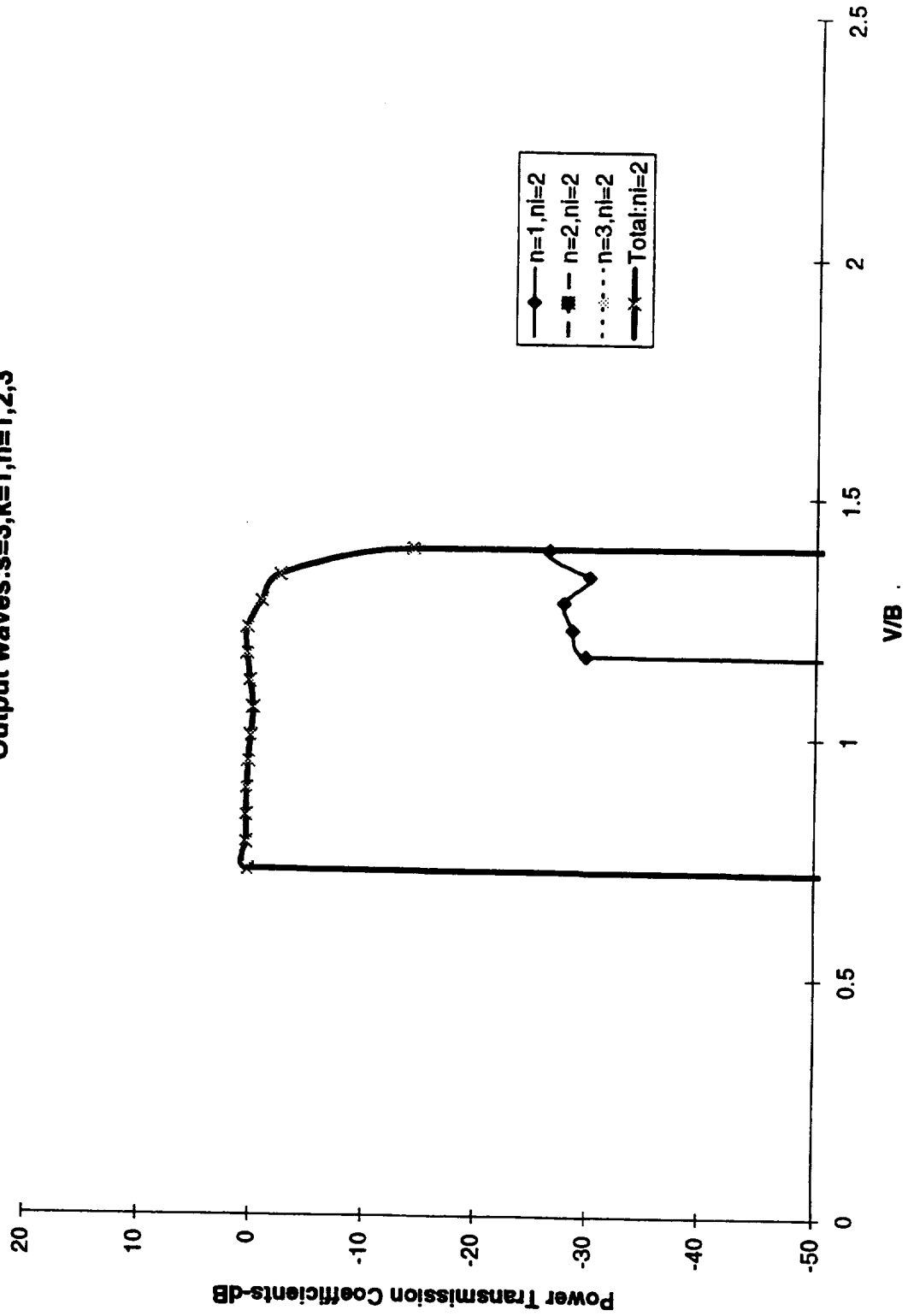
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

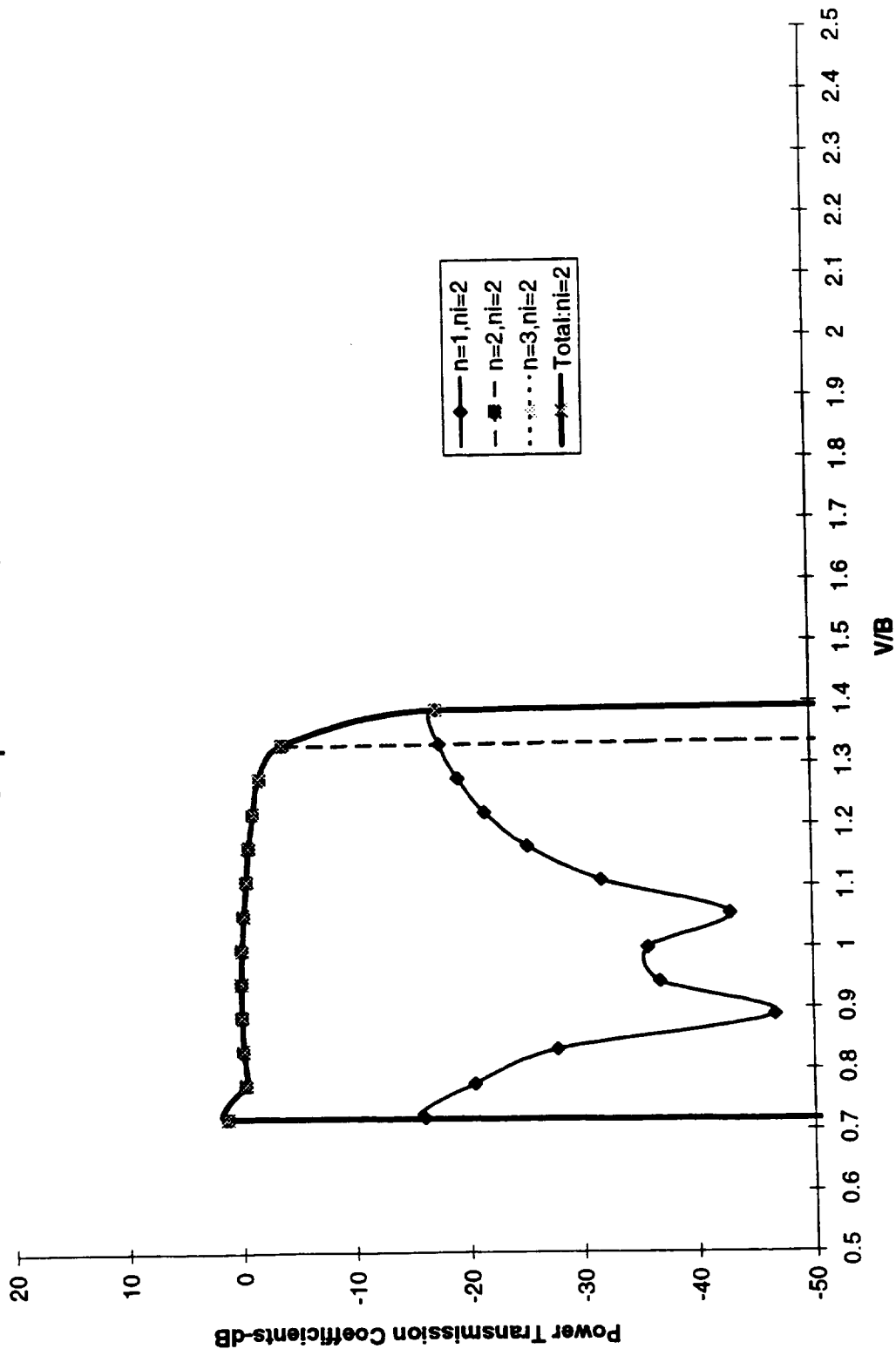
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

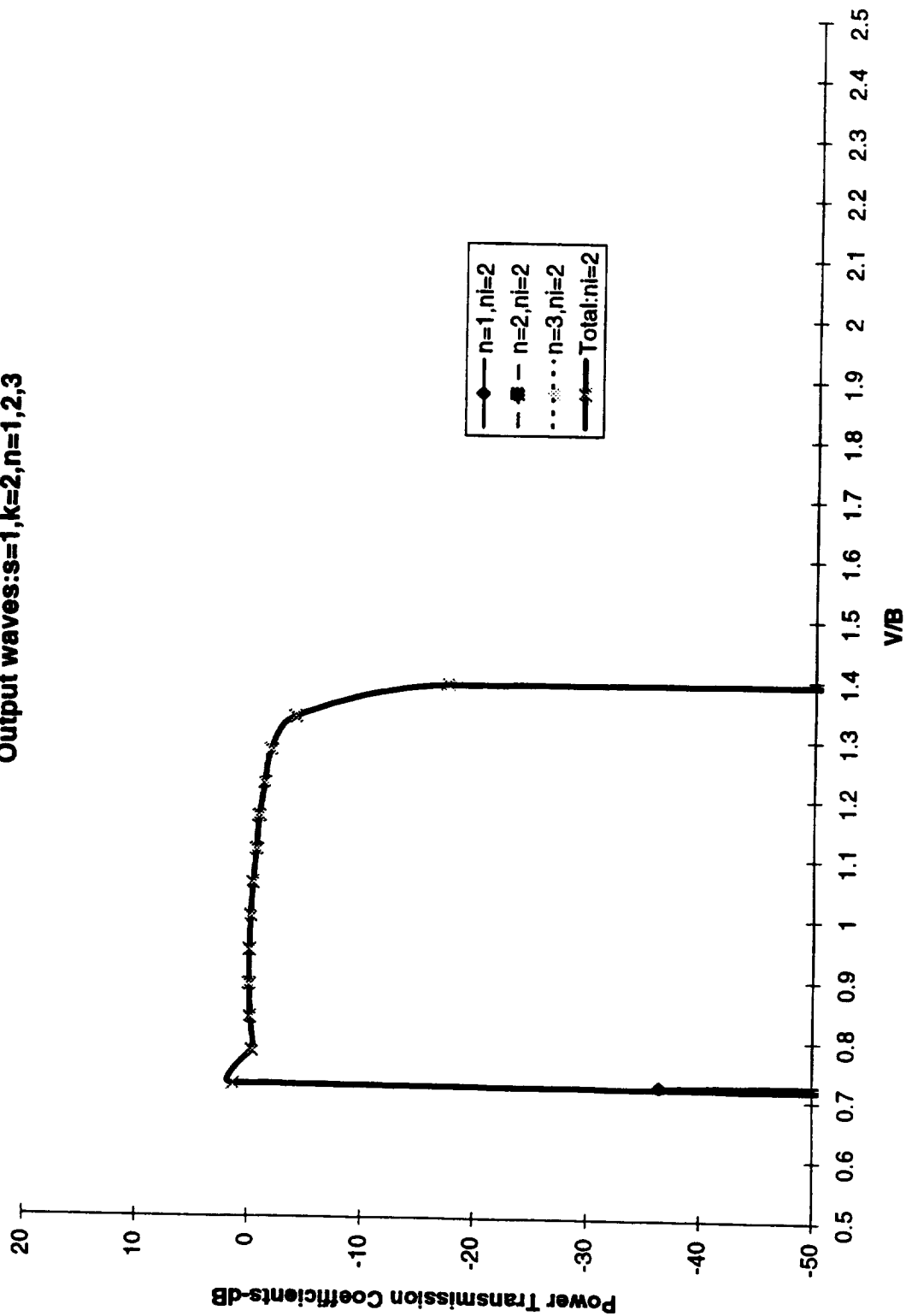
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

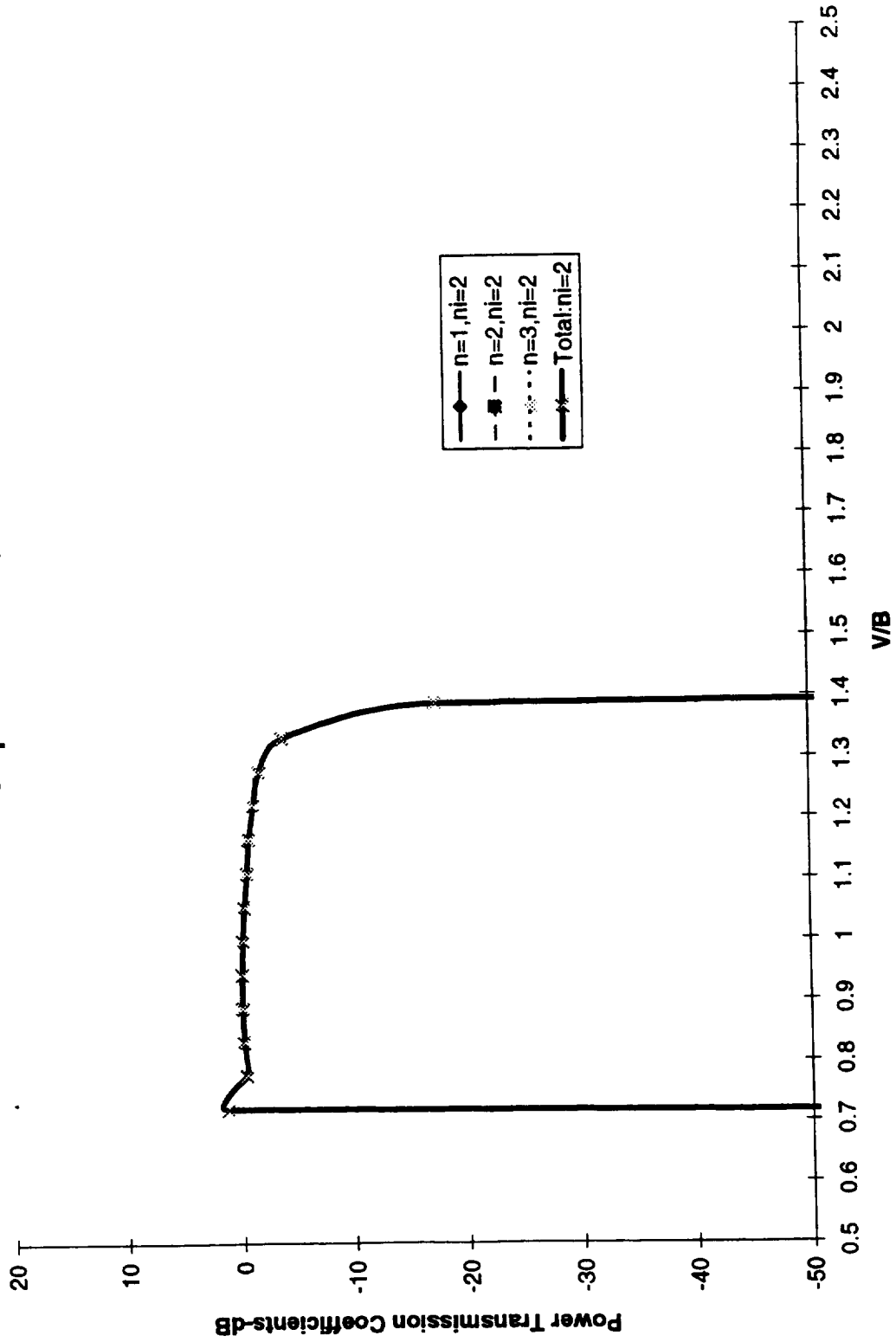
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=2$

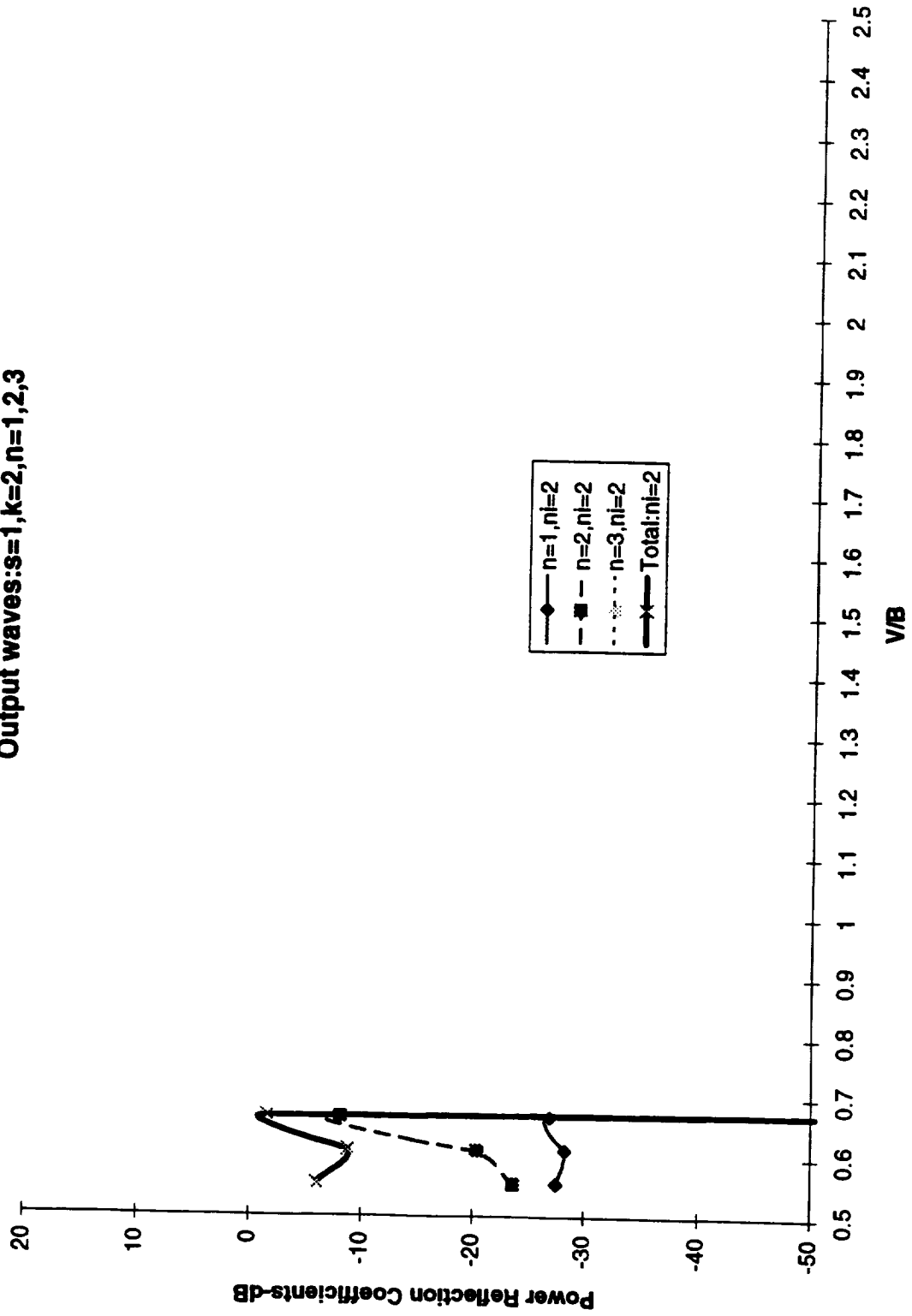
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=1, k_l=2, n_l=2$

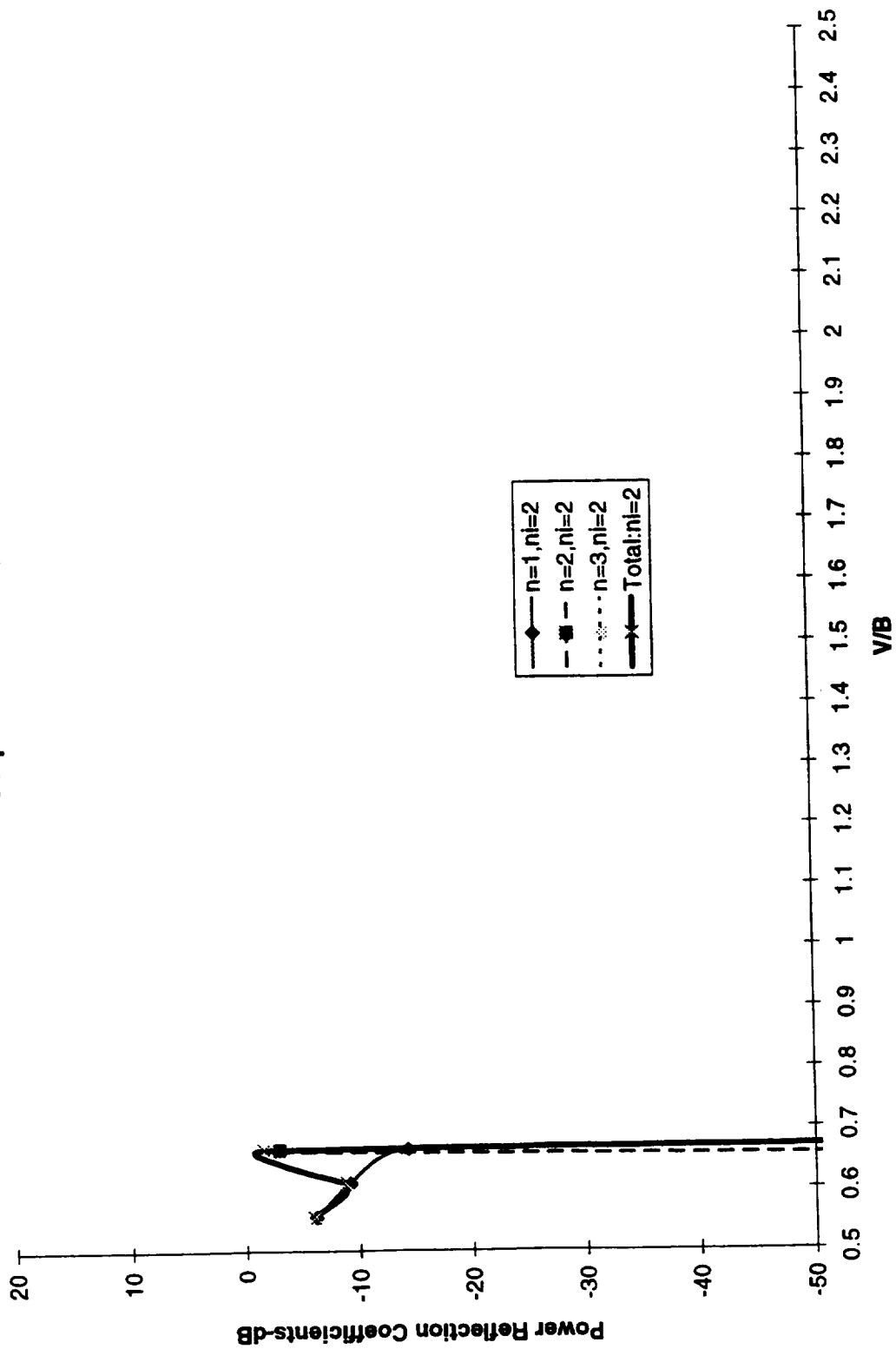
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

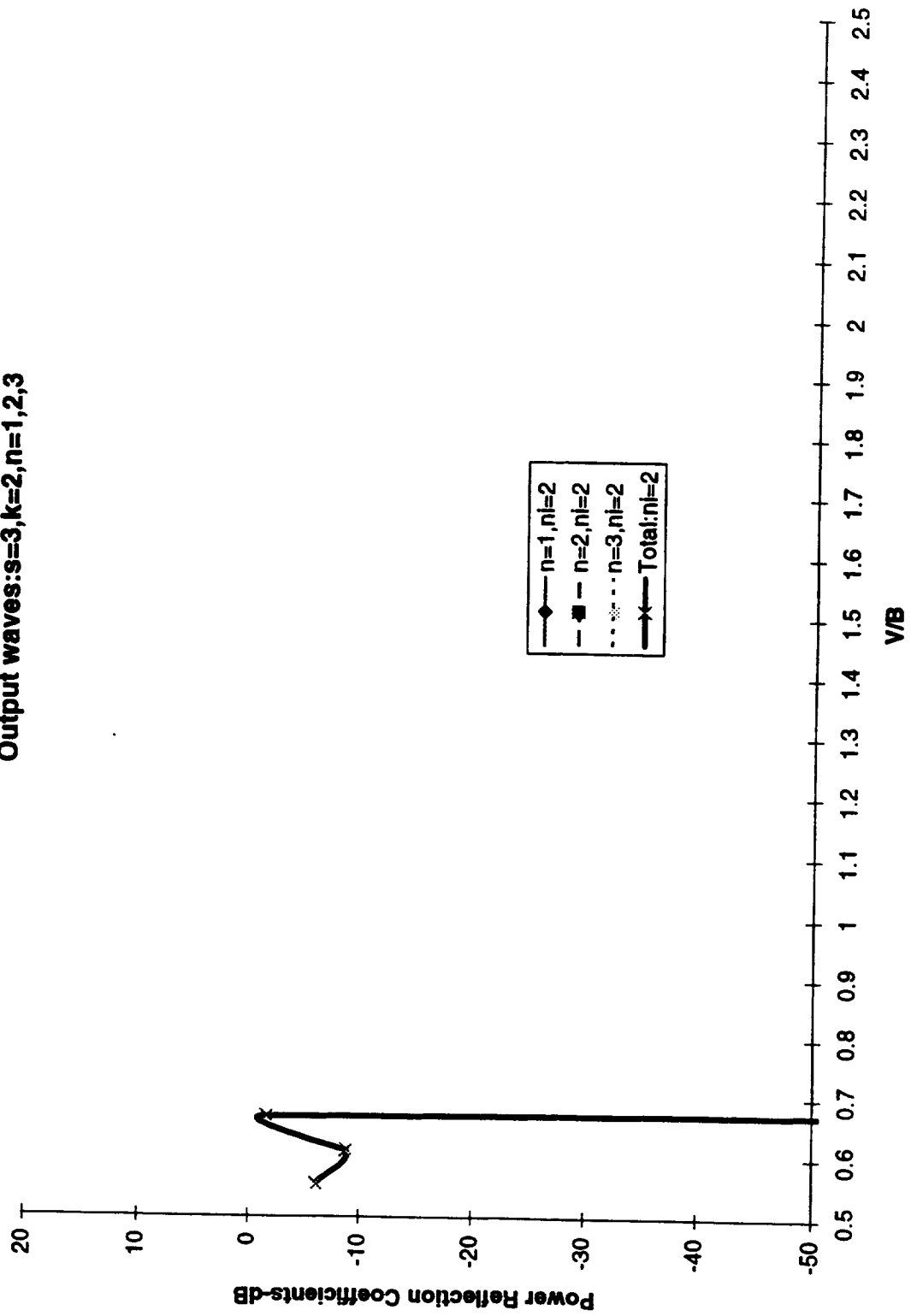
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

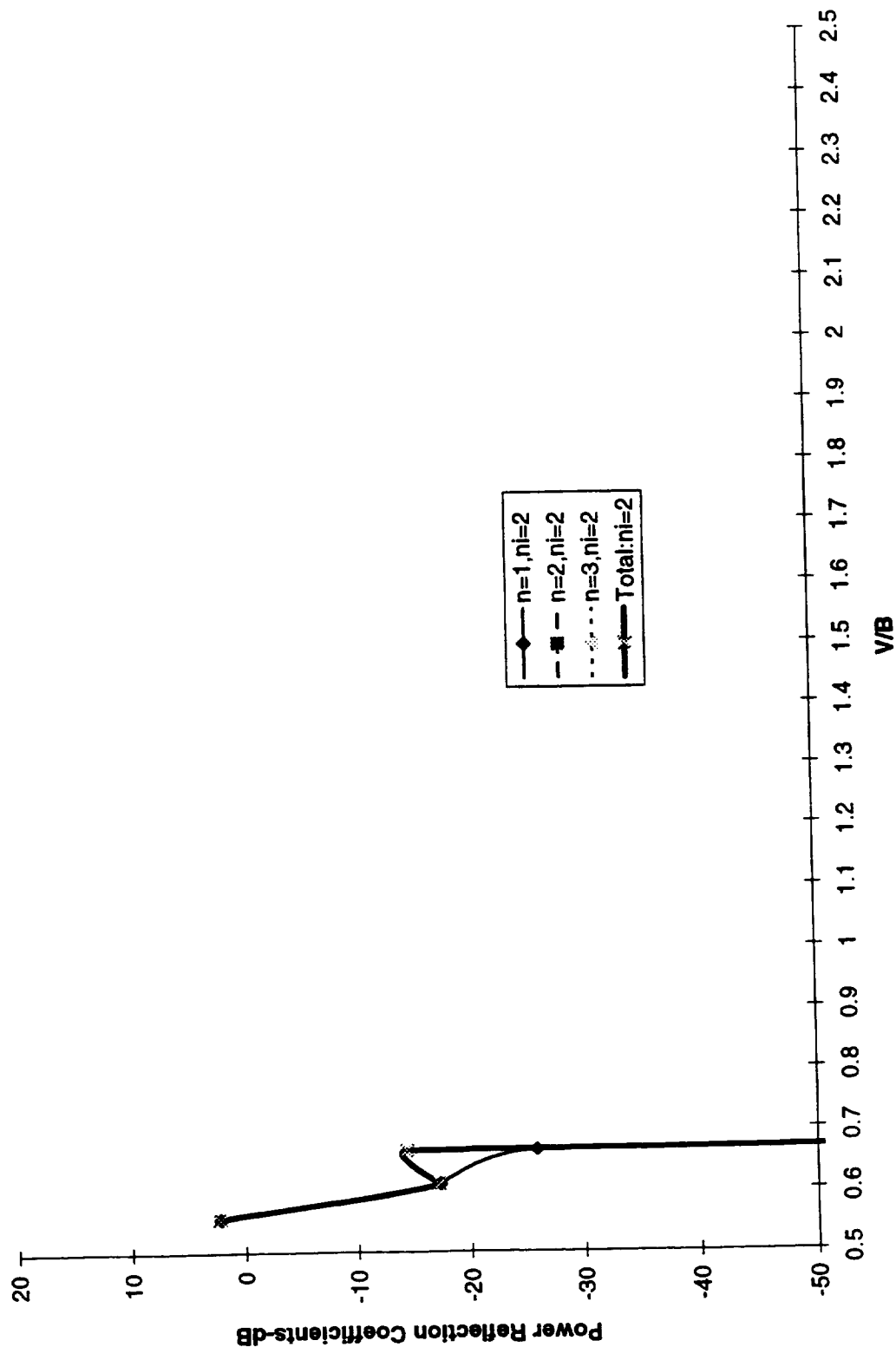
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

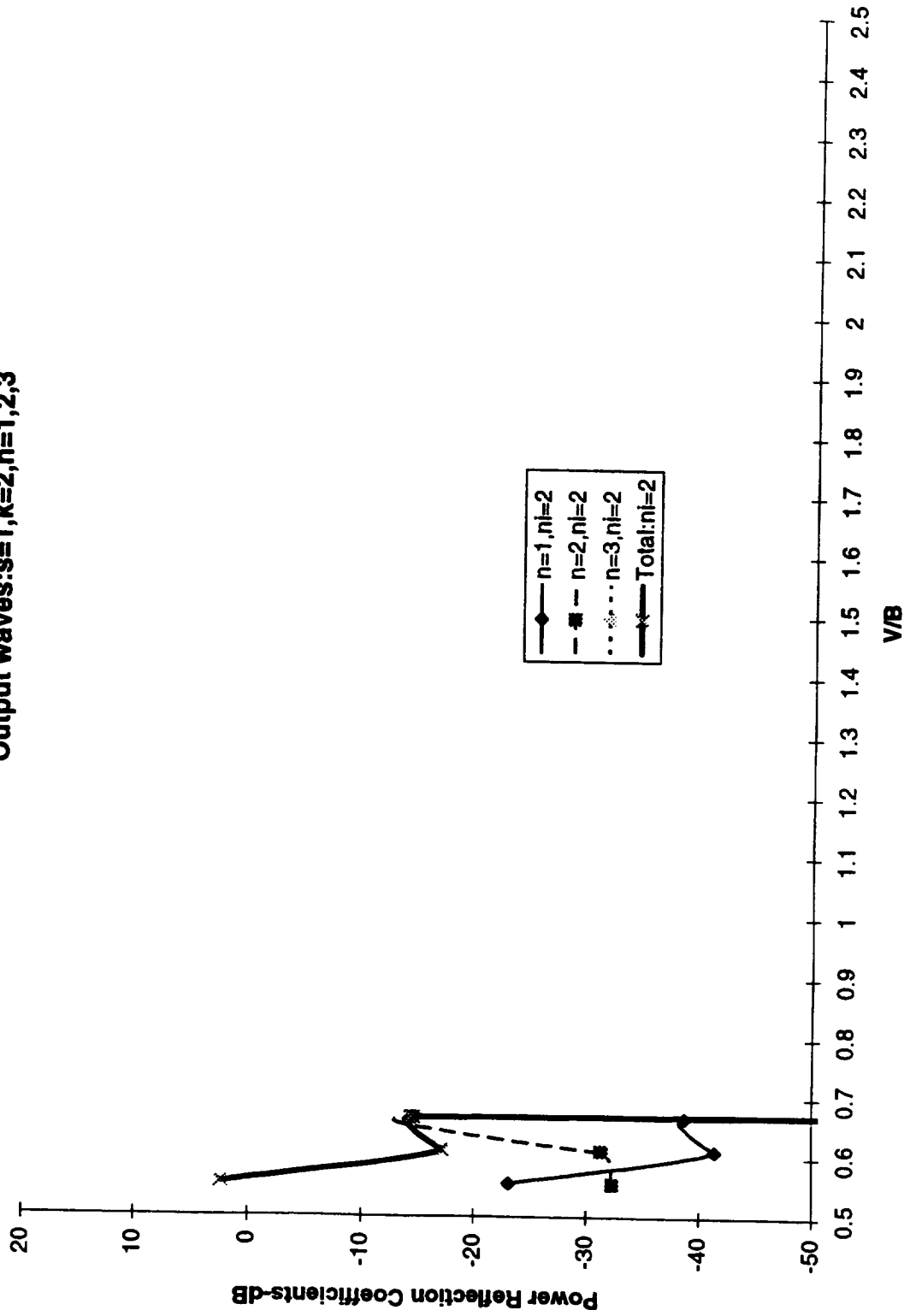
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

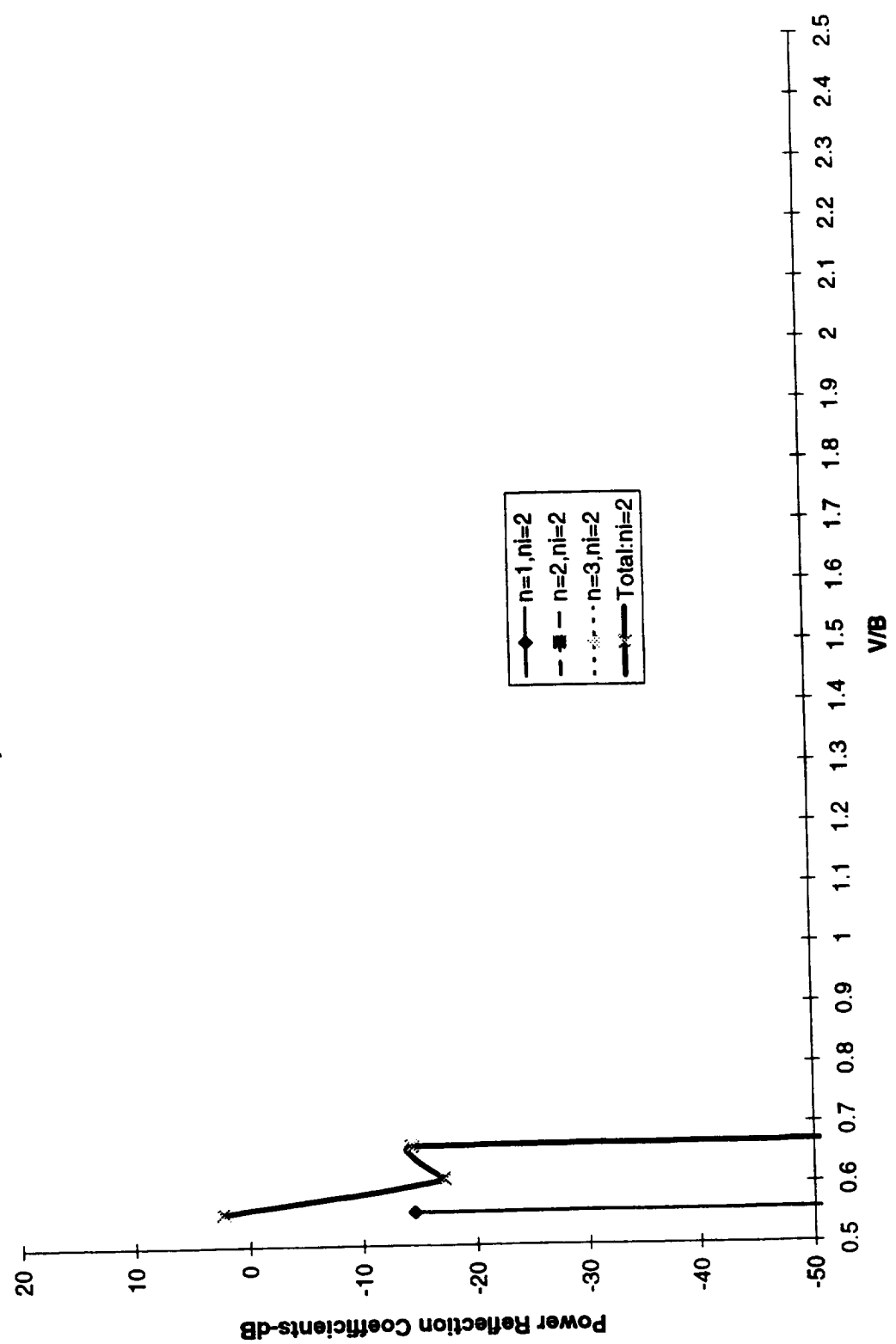
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

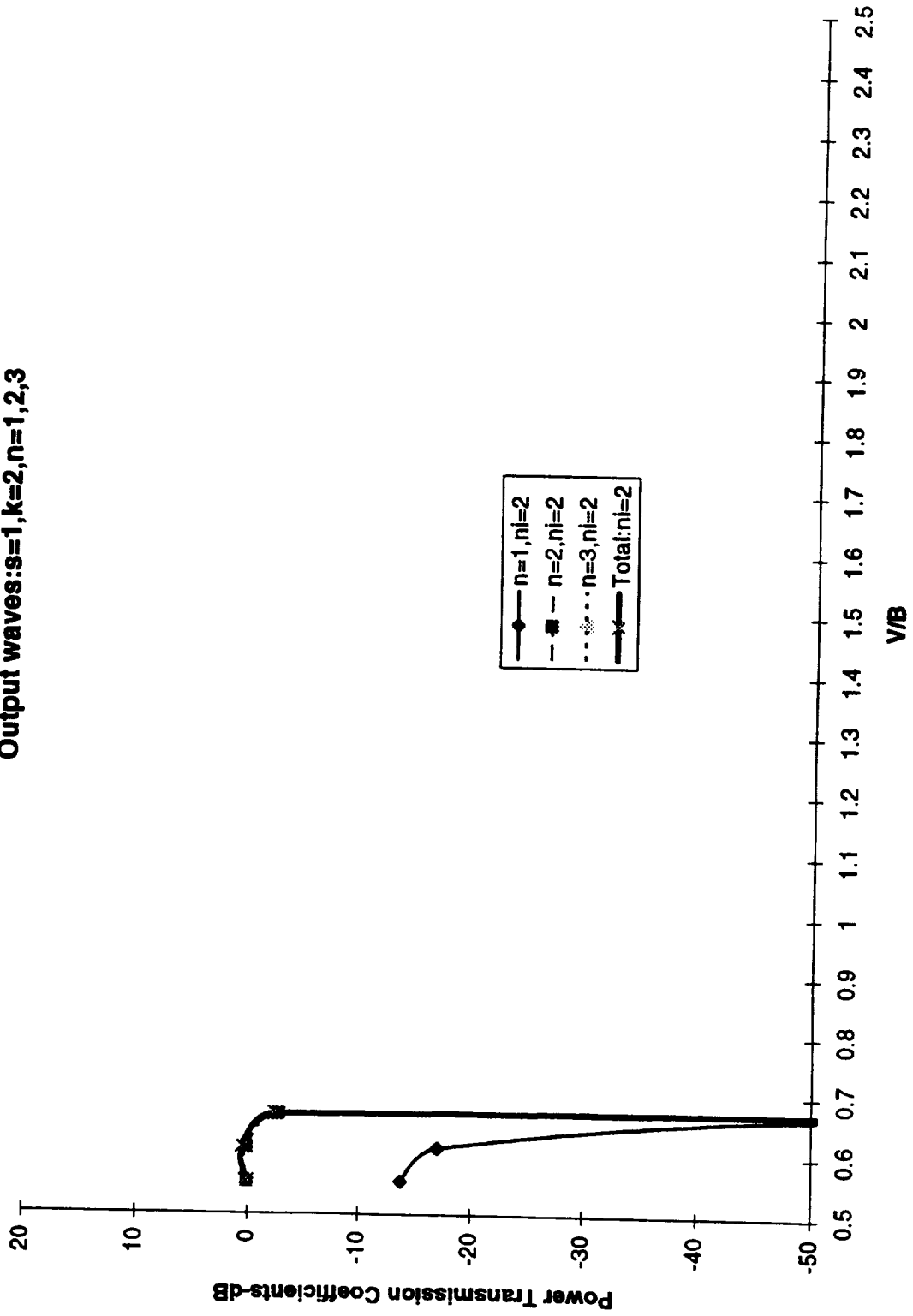
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

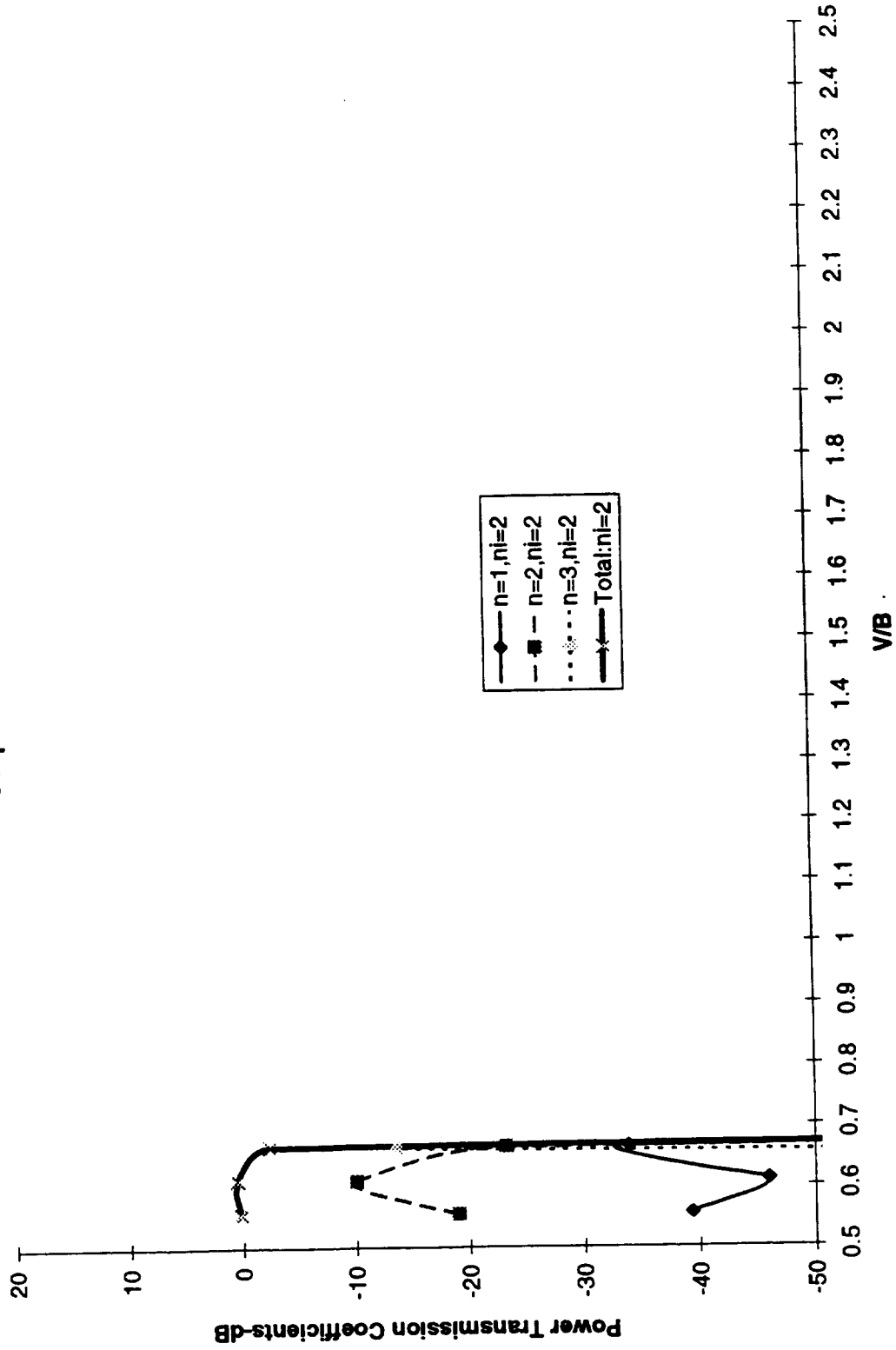
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=1, k_l=2, n_l=2$

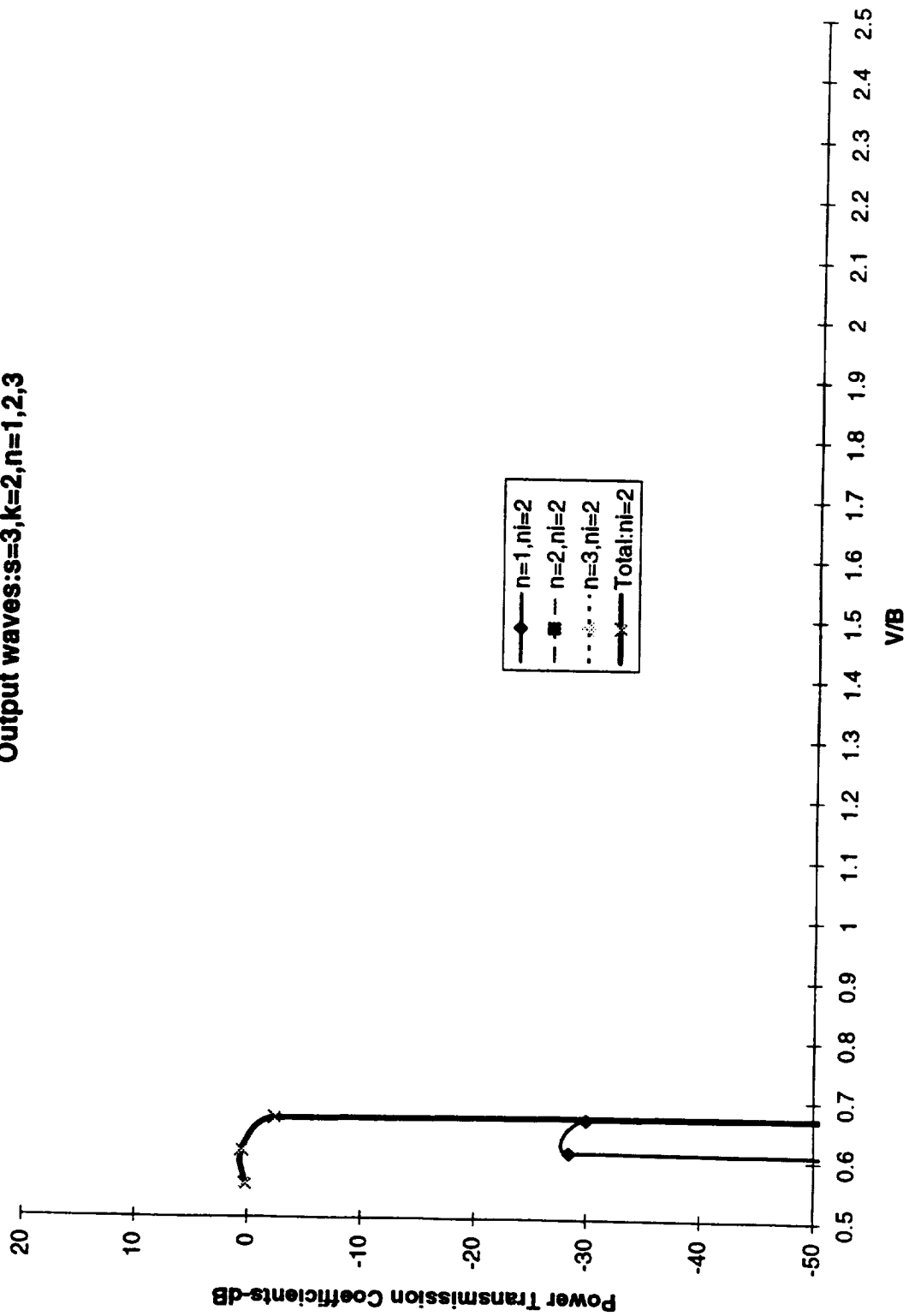
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

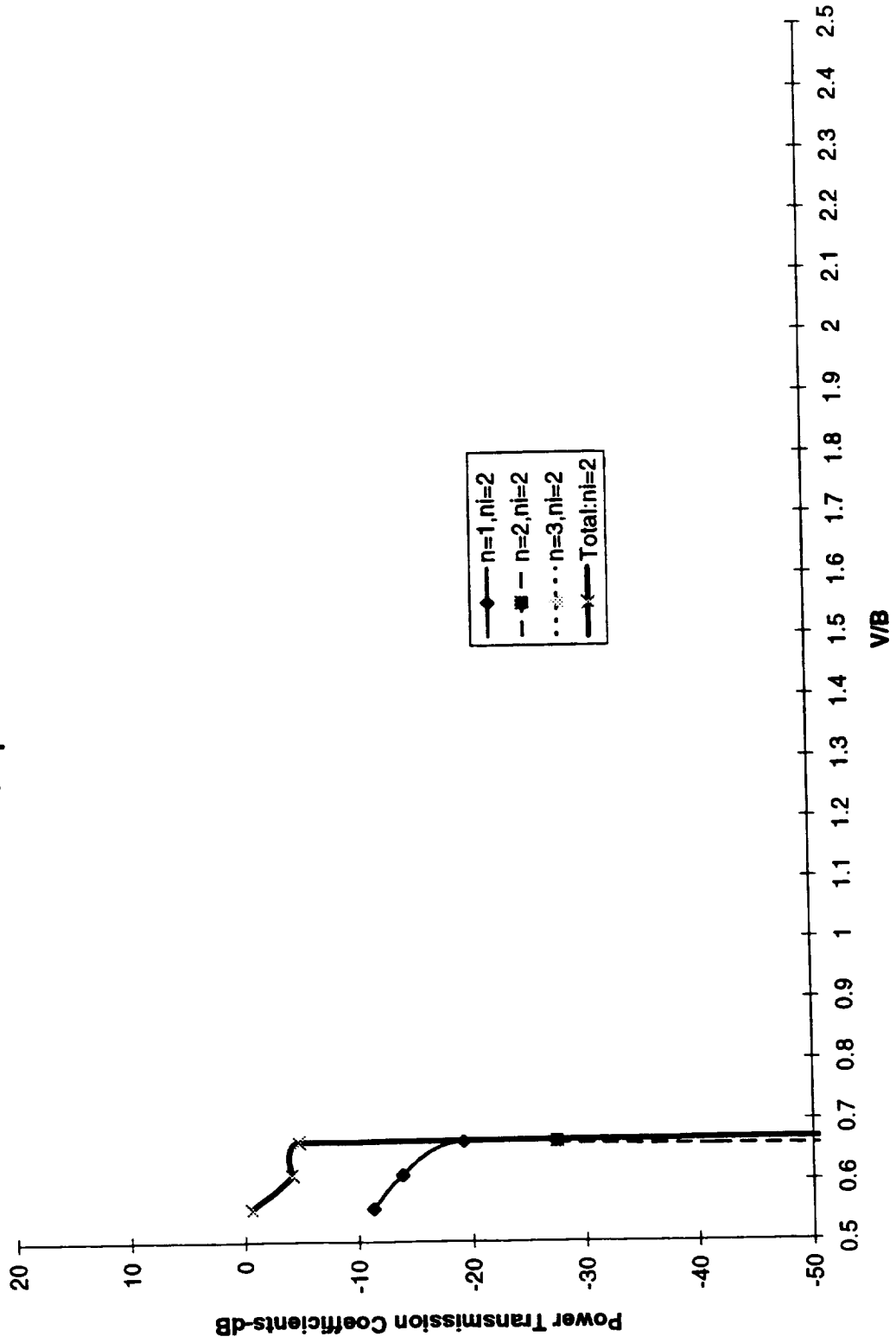
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

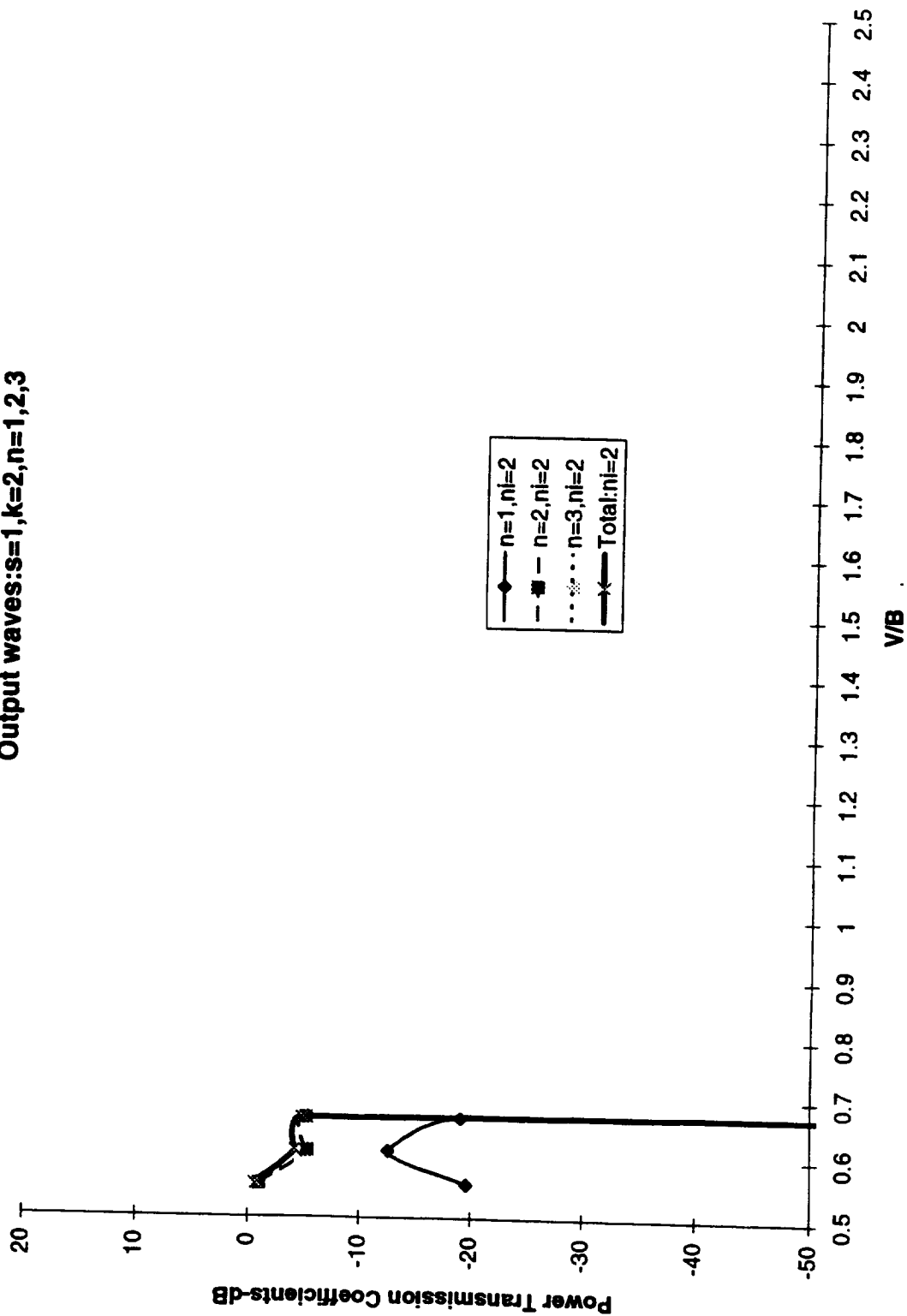
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=2$

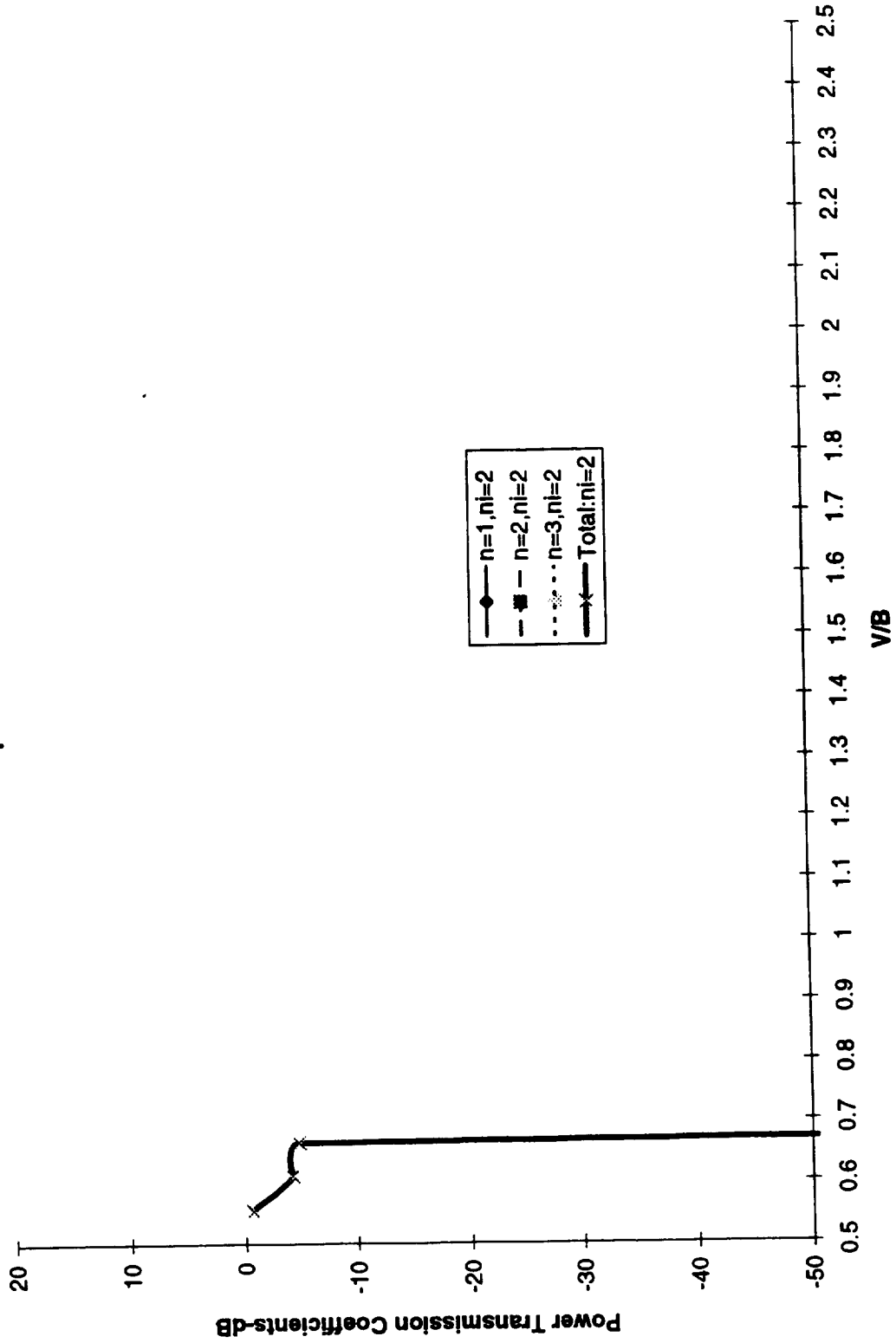
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_l=1, k_l=2, n_l=2$

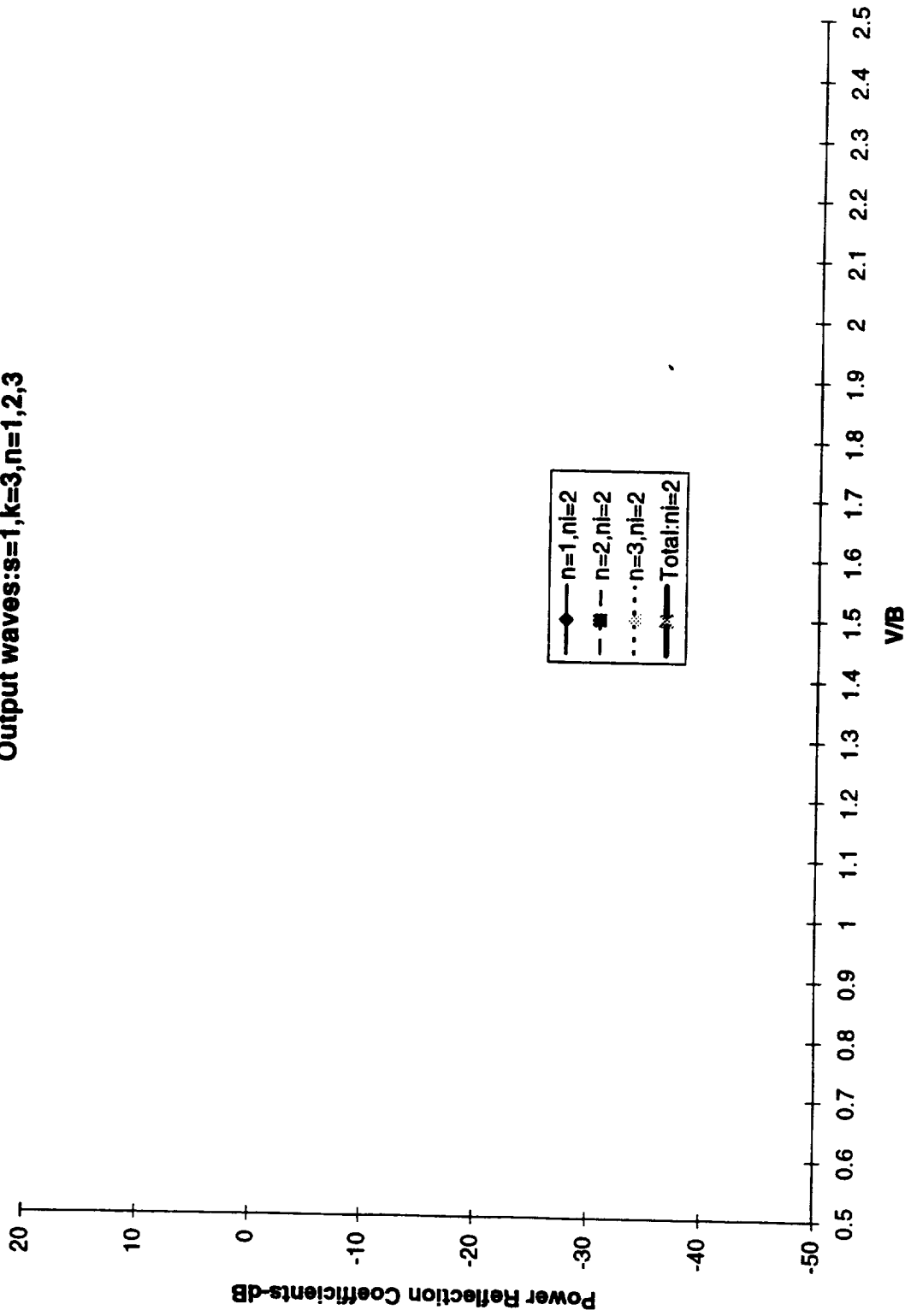
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

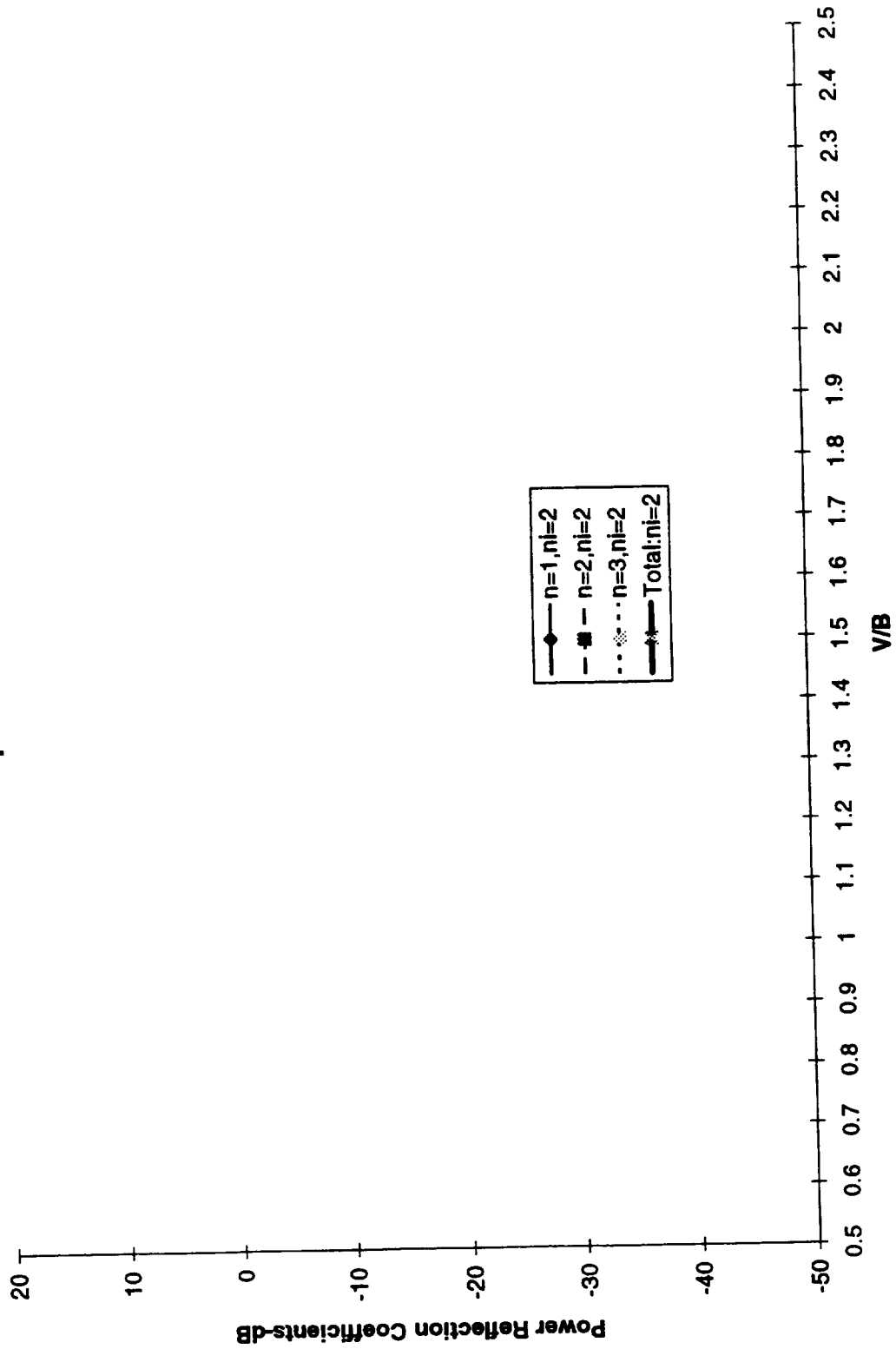
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=1, k_l=3, n_l=2$

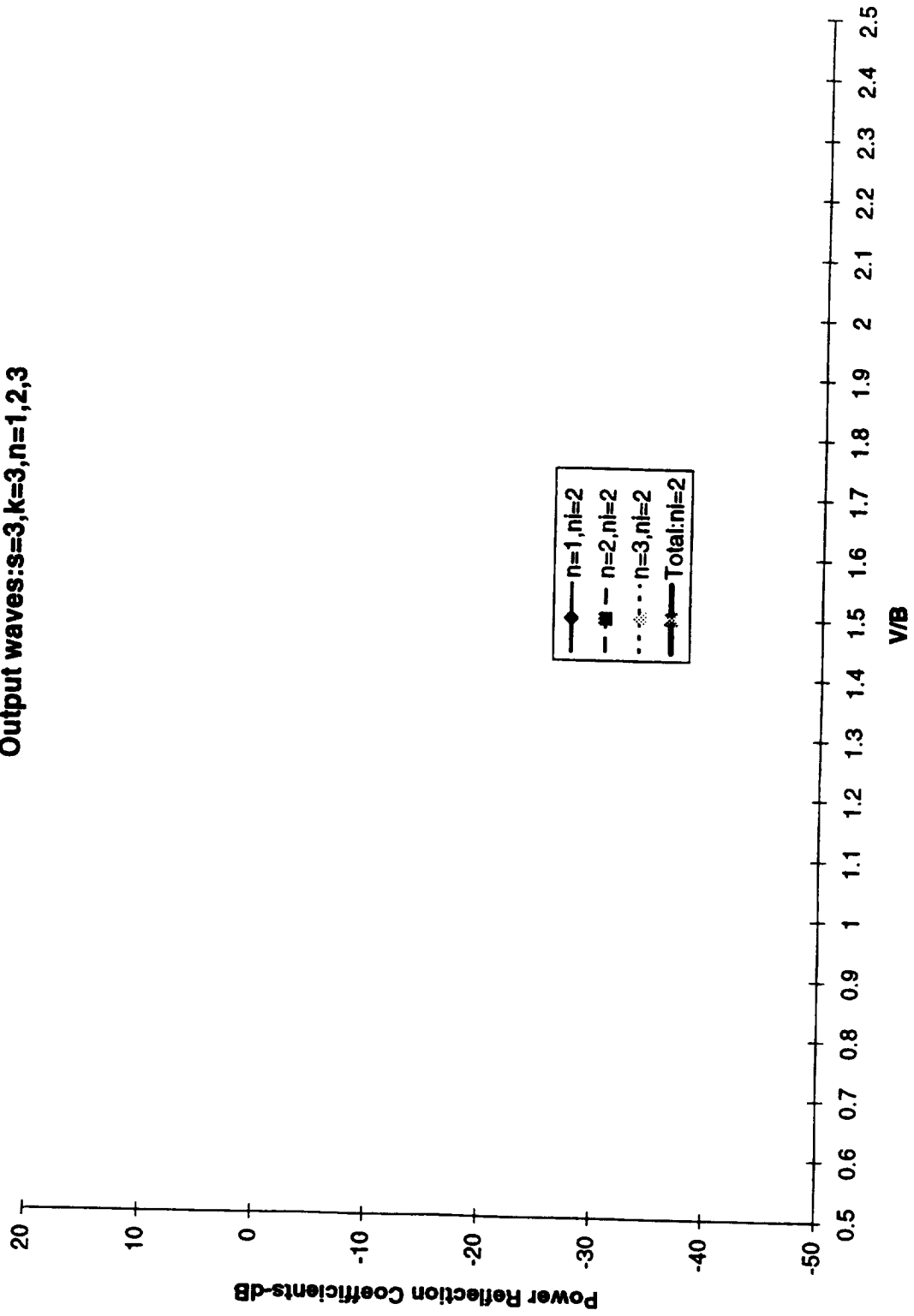
Output wave: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_l=3, n_l=2$

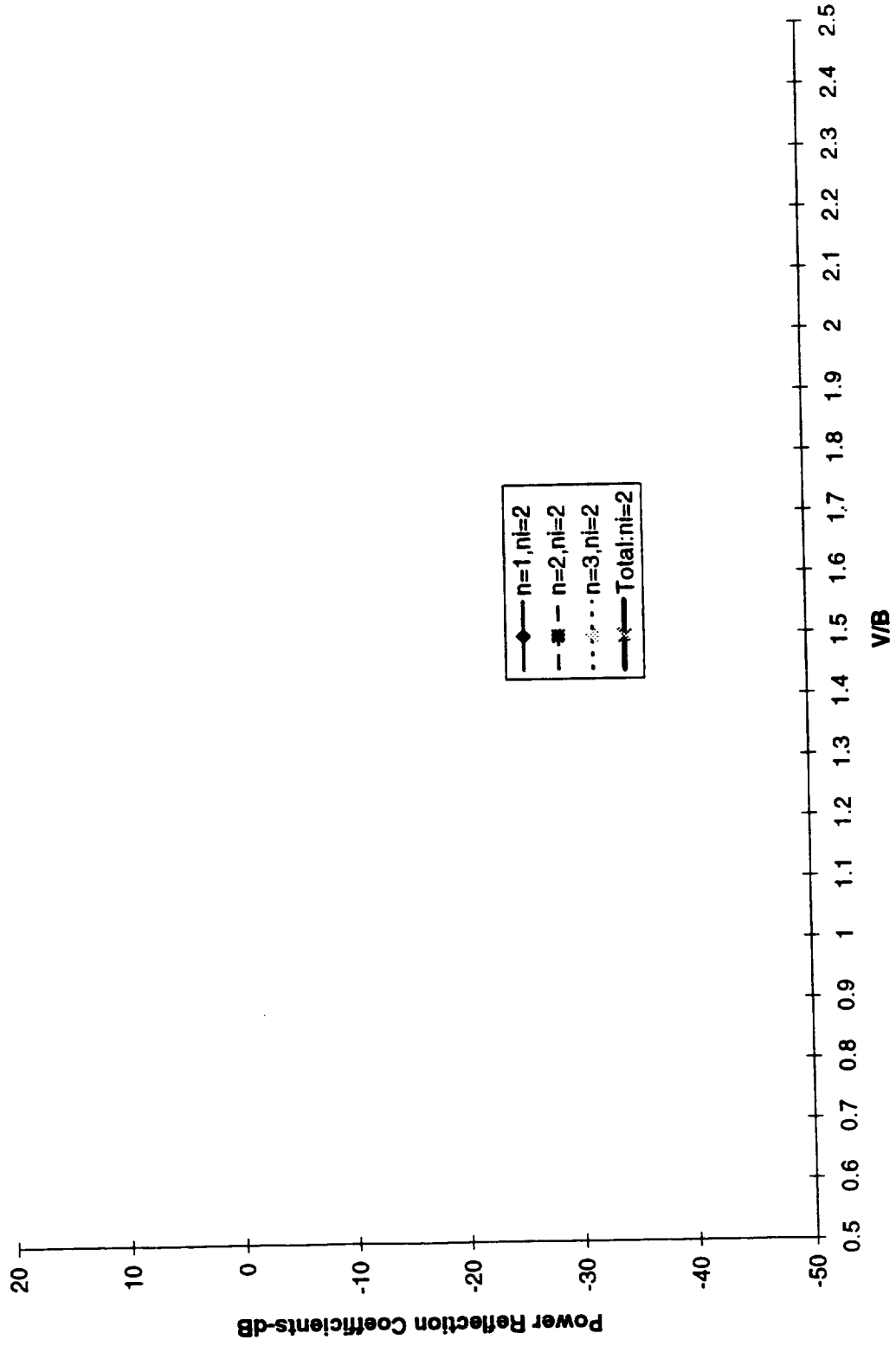
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

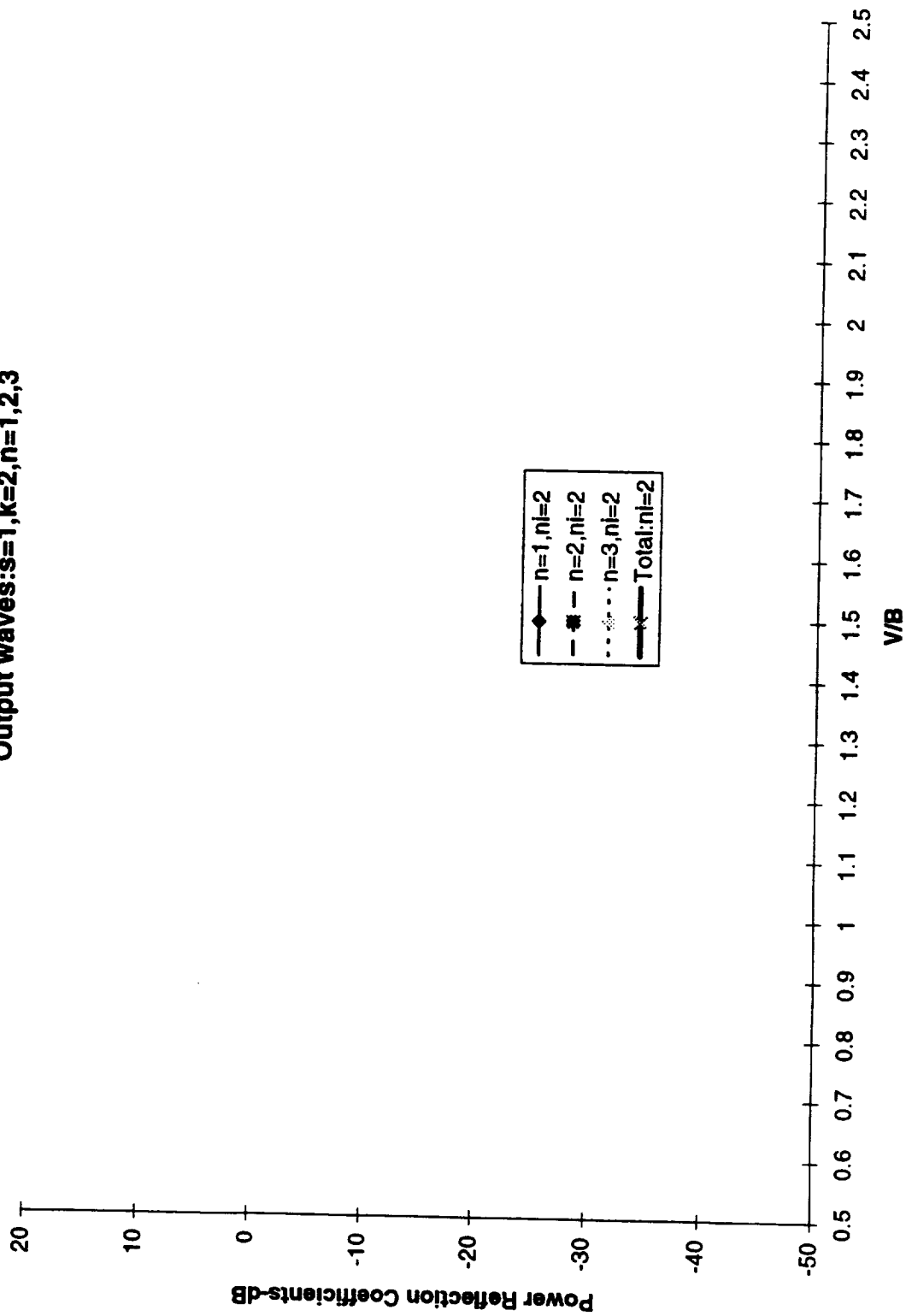
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_l=1, k_l=3, n_l=2$

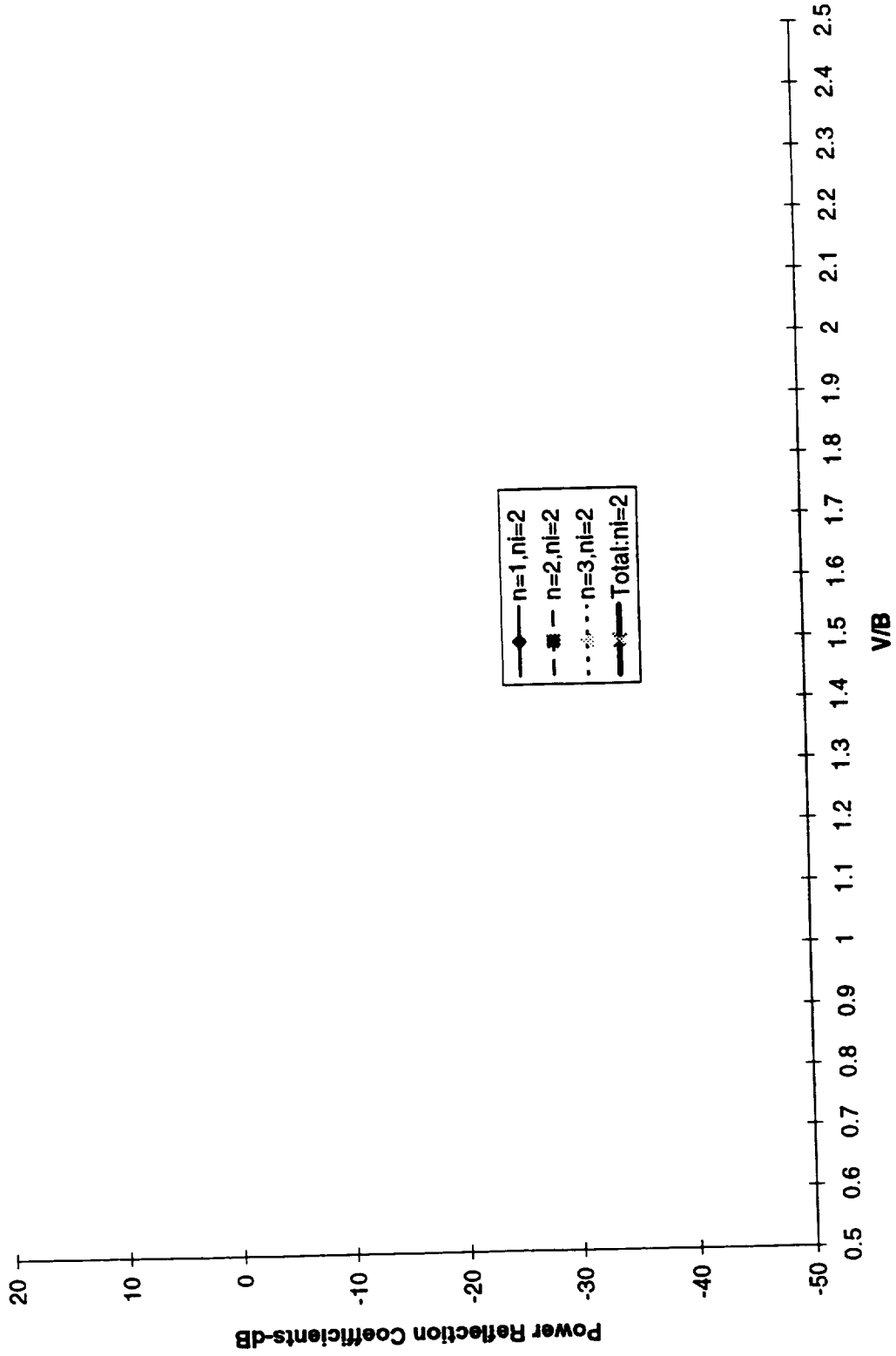
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

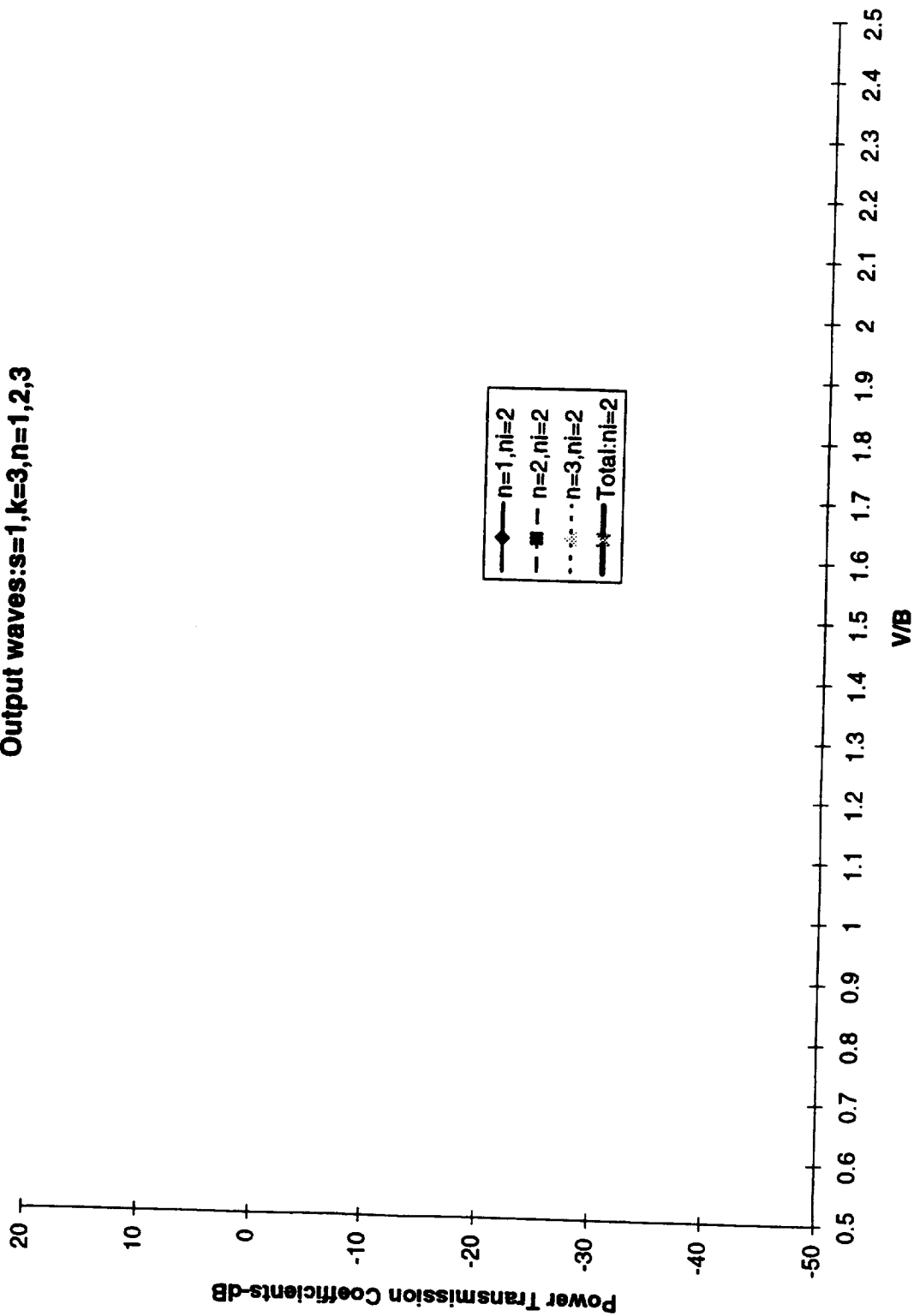
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=1, k_l=3, n_l=2$

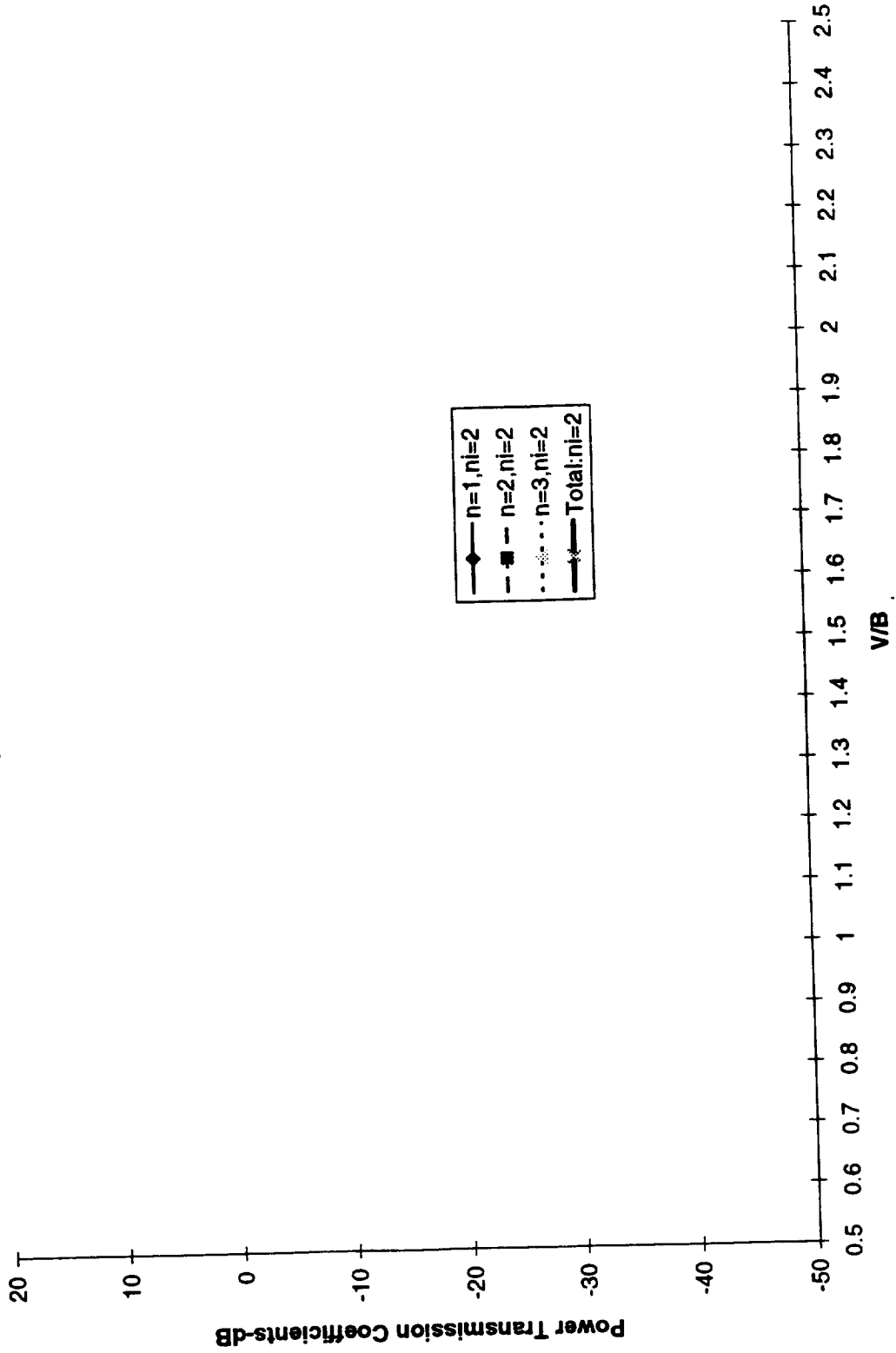
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

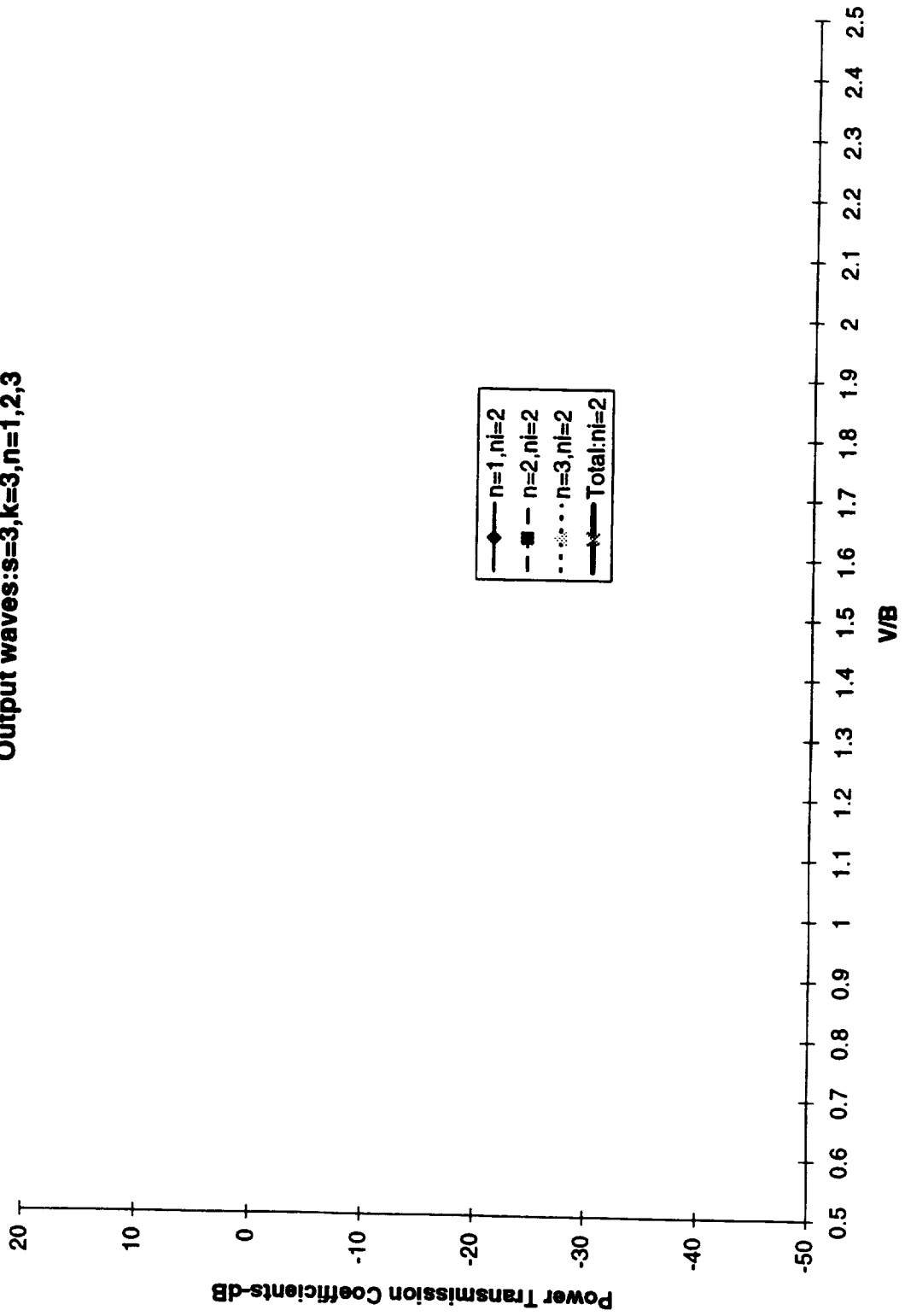
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

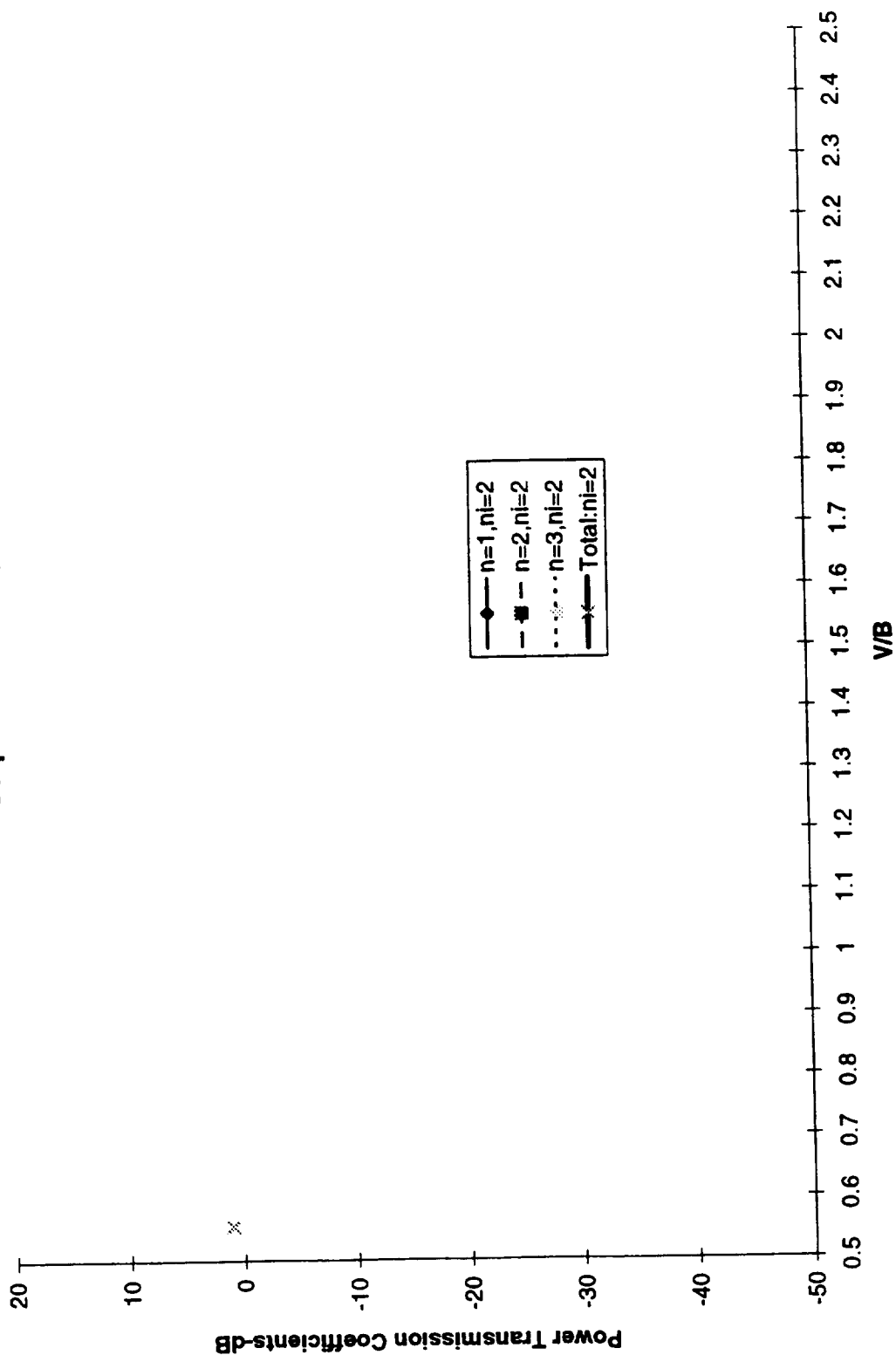
Output waves: $s=3, k=3, n=1, 2, 3$



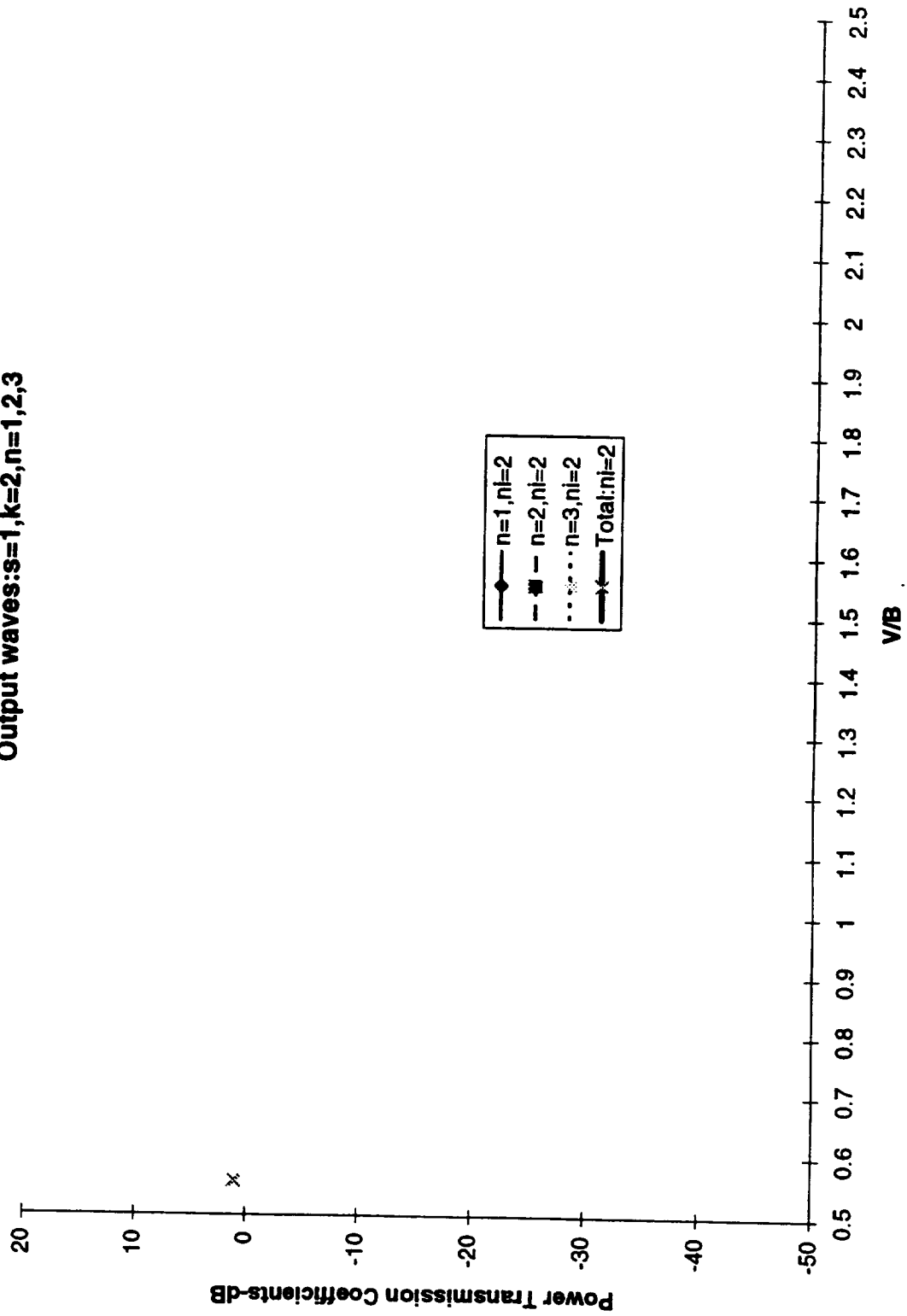
Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=2$

Output waves: $s=1, k=1, n=1, 2, 3$



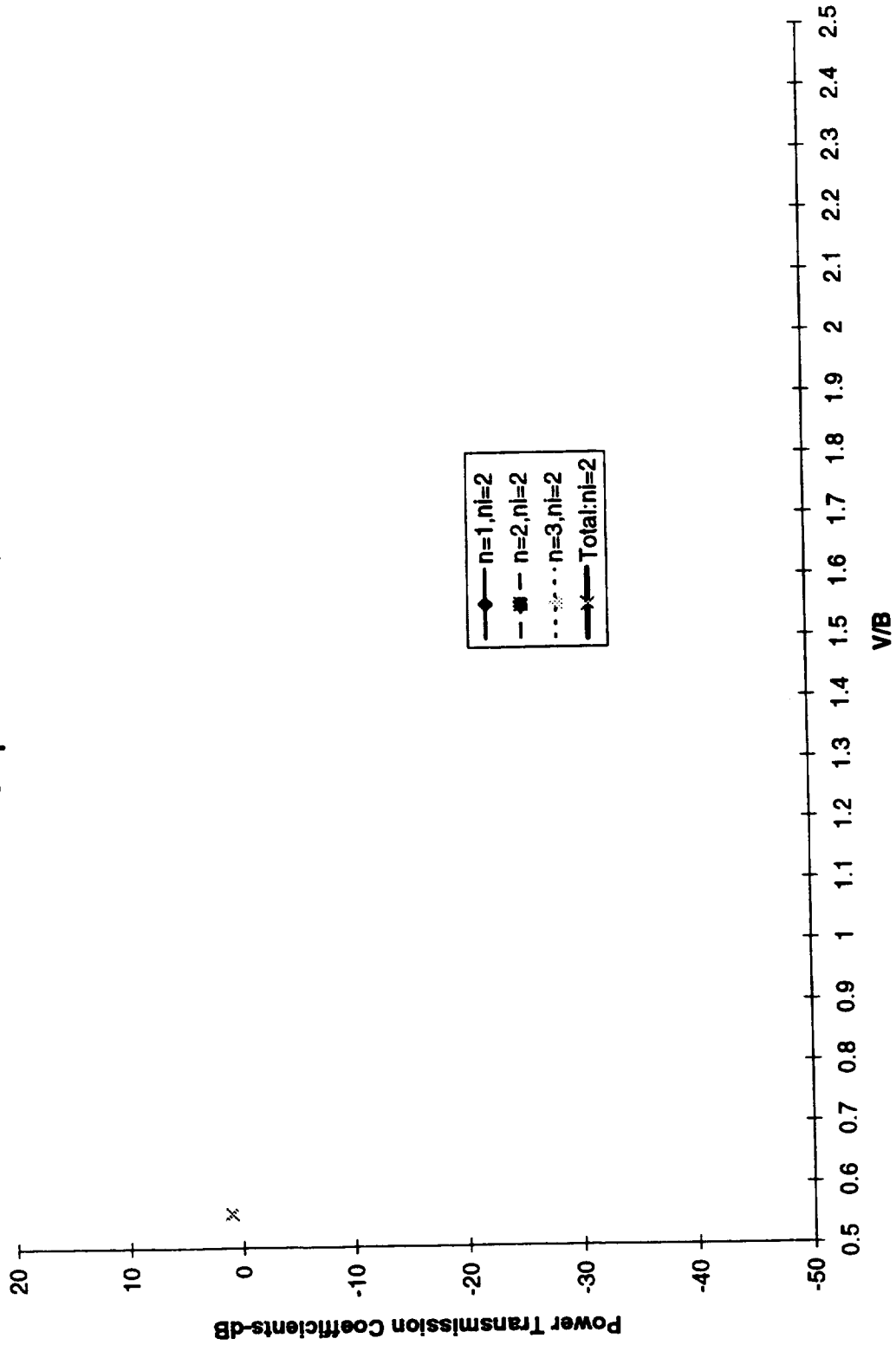
Stator Transmission-Mid Speed Case
Input wave: $s_l=1, k_l=3, n_l=2$
Output waves: $s=1, k=2, n=1, 2, 3$



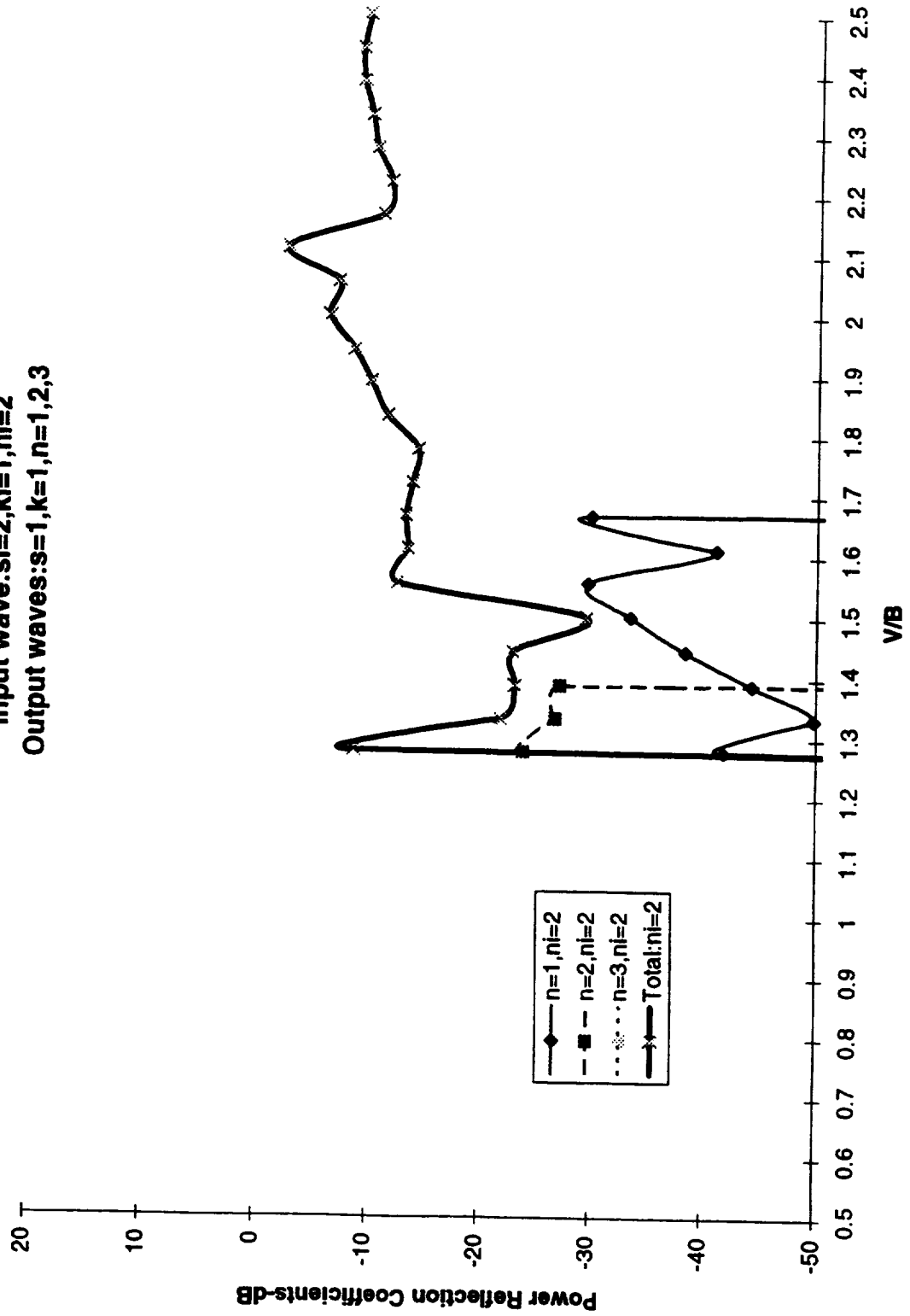
Stator Transmission-Mid Speed Case

Input wave: $s_l=1, k_l=3, n_l=2$

Output wave: $s=1, k=3, n=1, 2, 3$



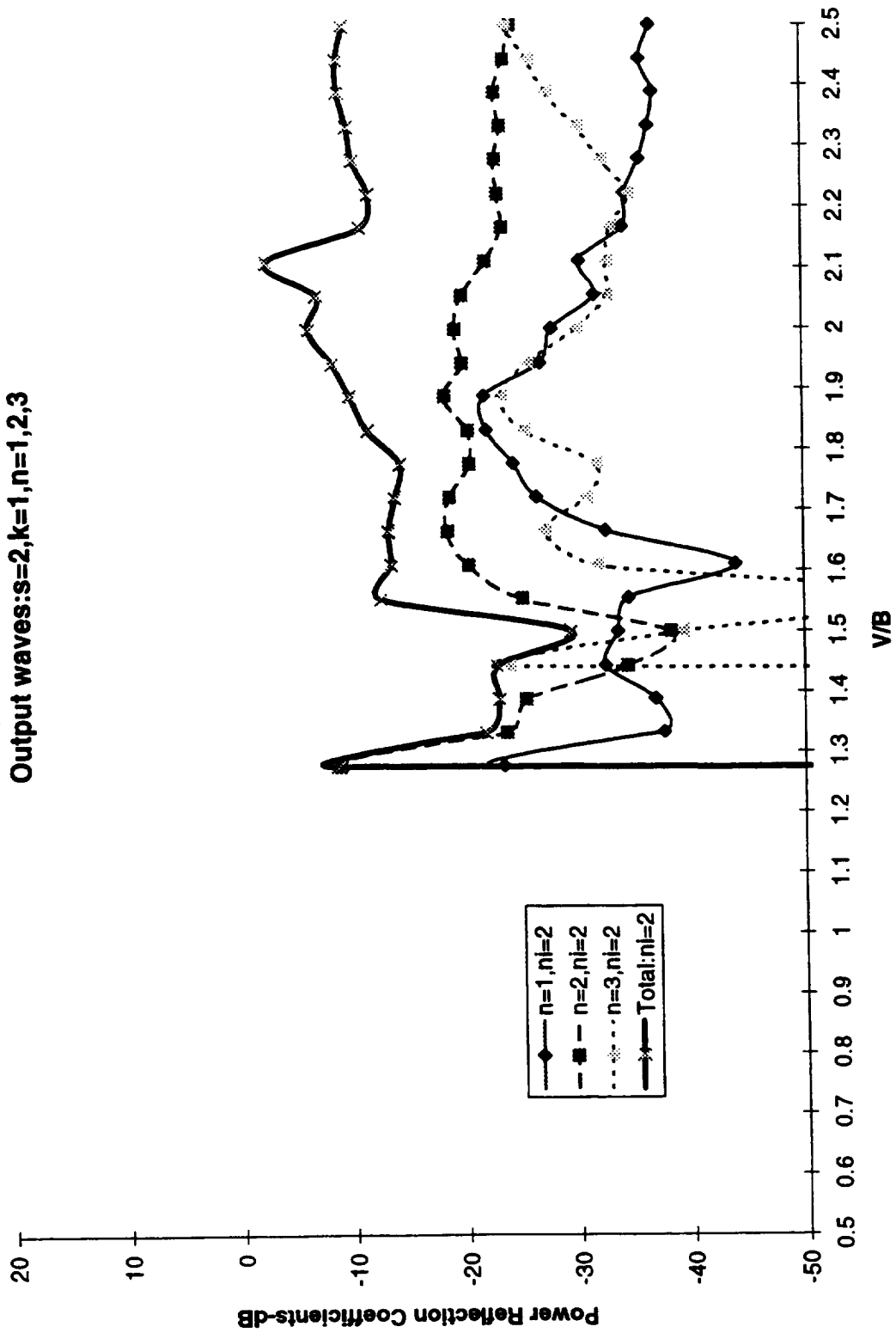
Rotor Reflection-Mid Speed Case
Input wave: $s_i=2, k_i=1, n_i=2$
Output waves: $s=1, k=1, n=1, 2, 3$



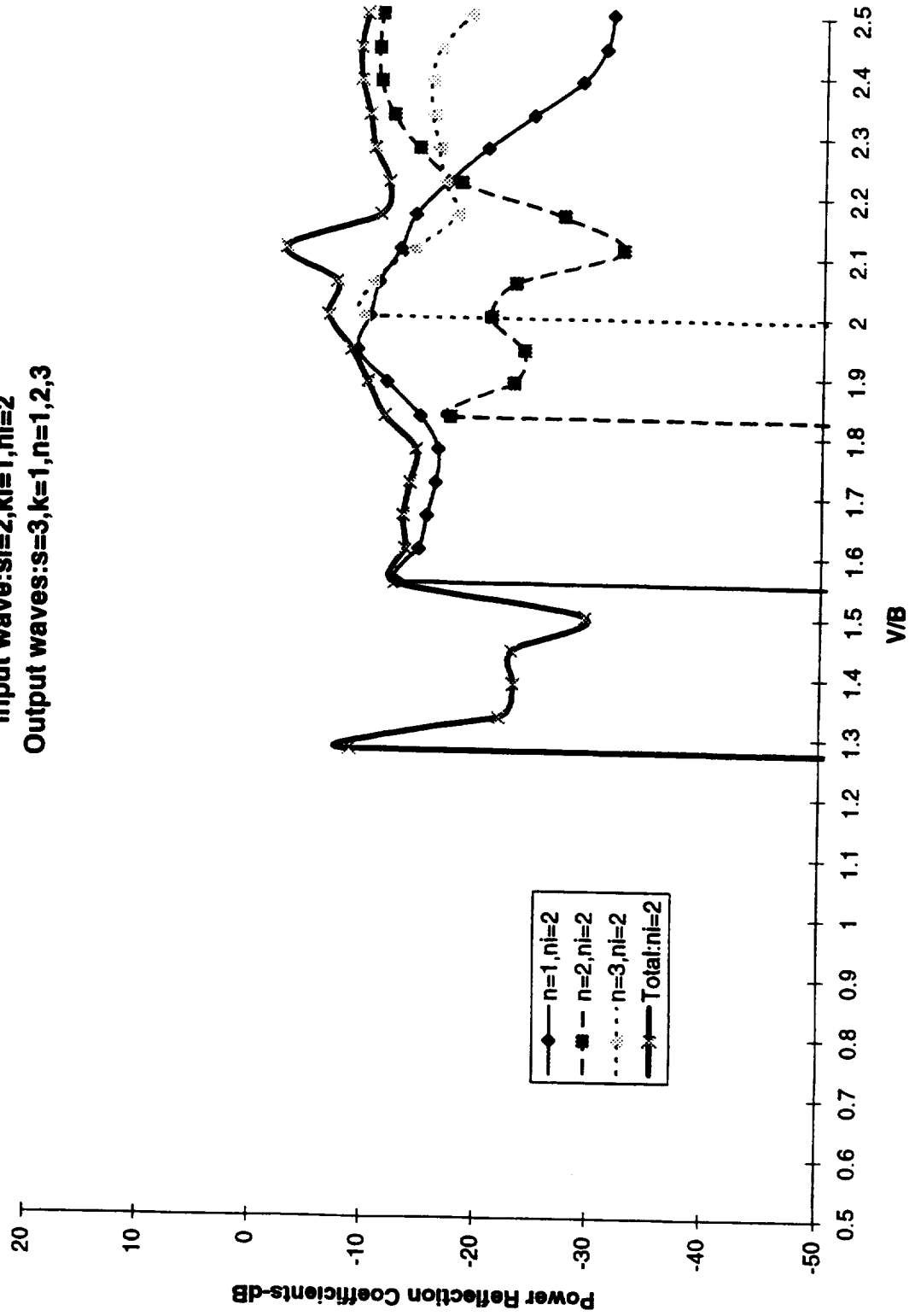
Rotor Reflection-Mid Speed Case

Input wave: $s_l=2, k_l=1, n_l=2$

Output waves: $s=2, k=1, n=1, 2, 3$



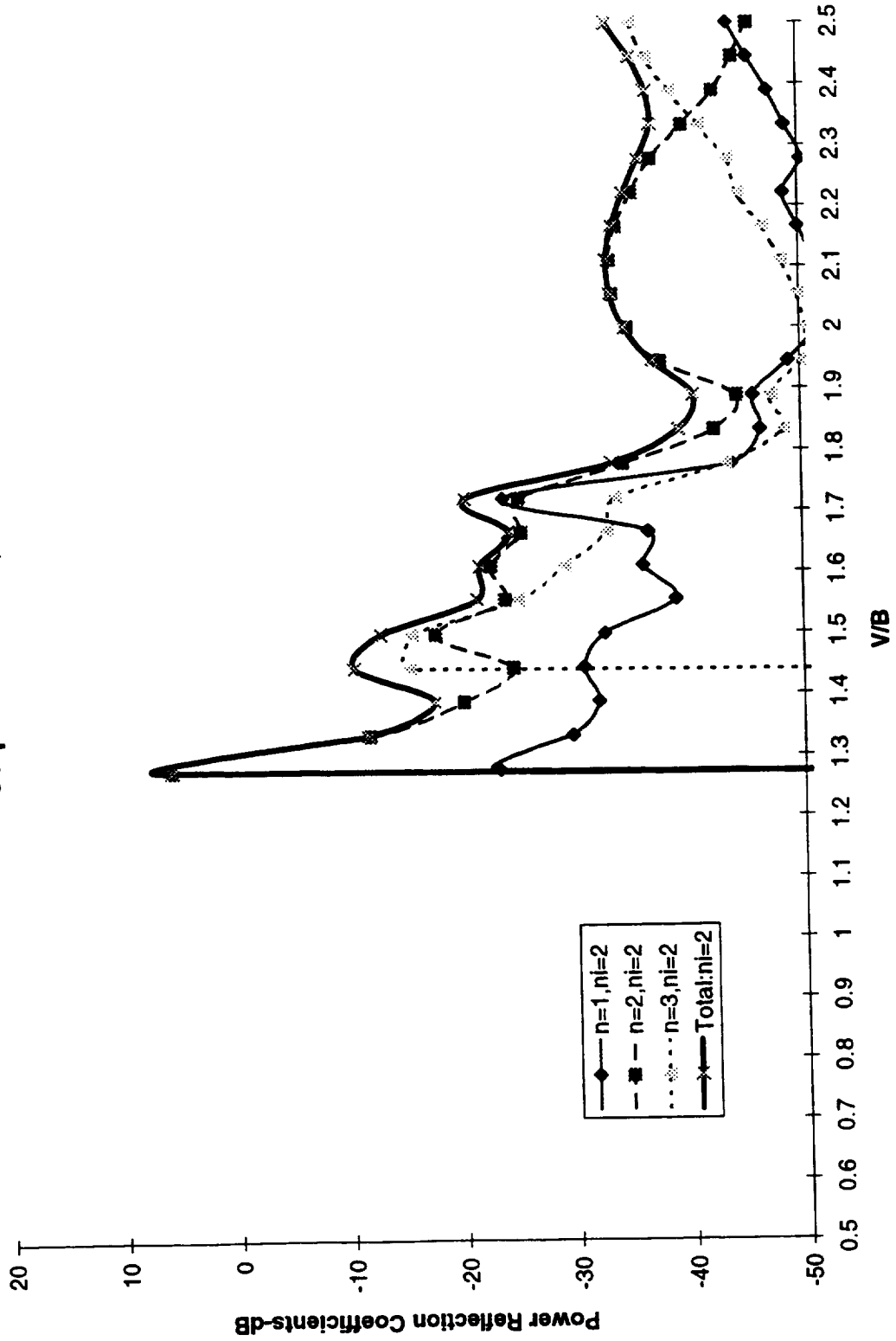
Rotor Reflection-Mid Speed Case
Input wave: $s_i=2, k_i=1, n_i=2$
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_l=2, k_l=1, n_l=2$

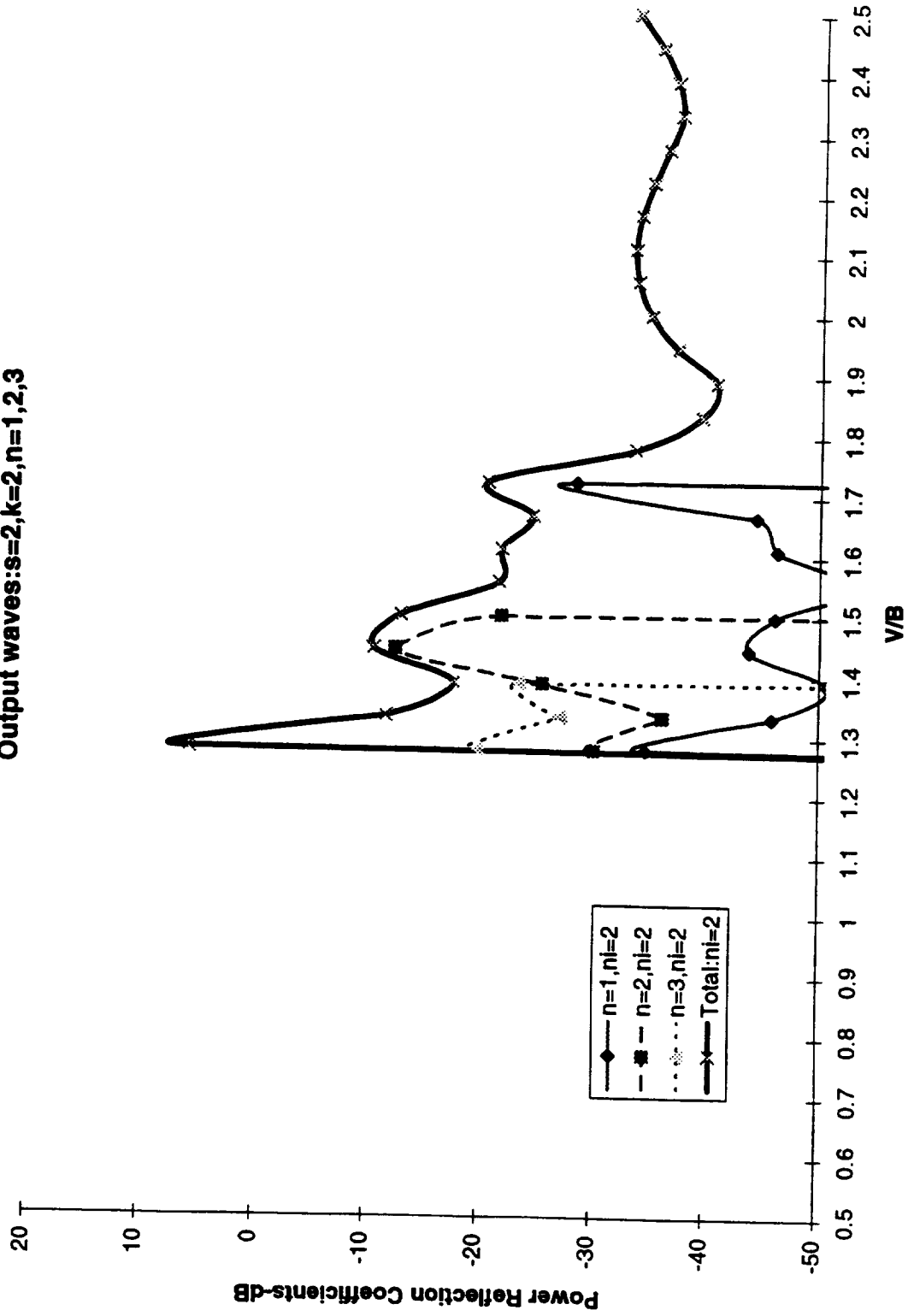
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

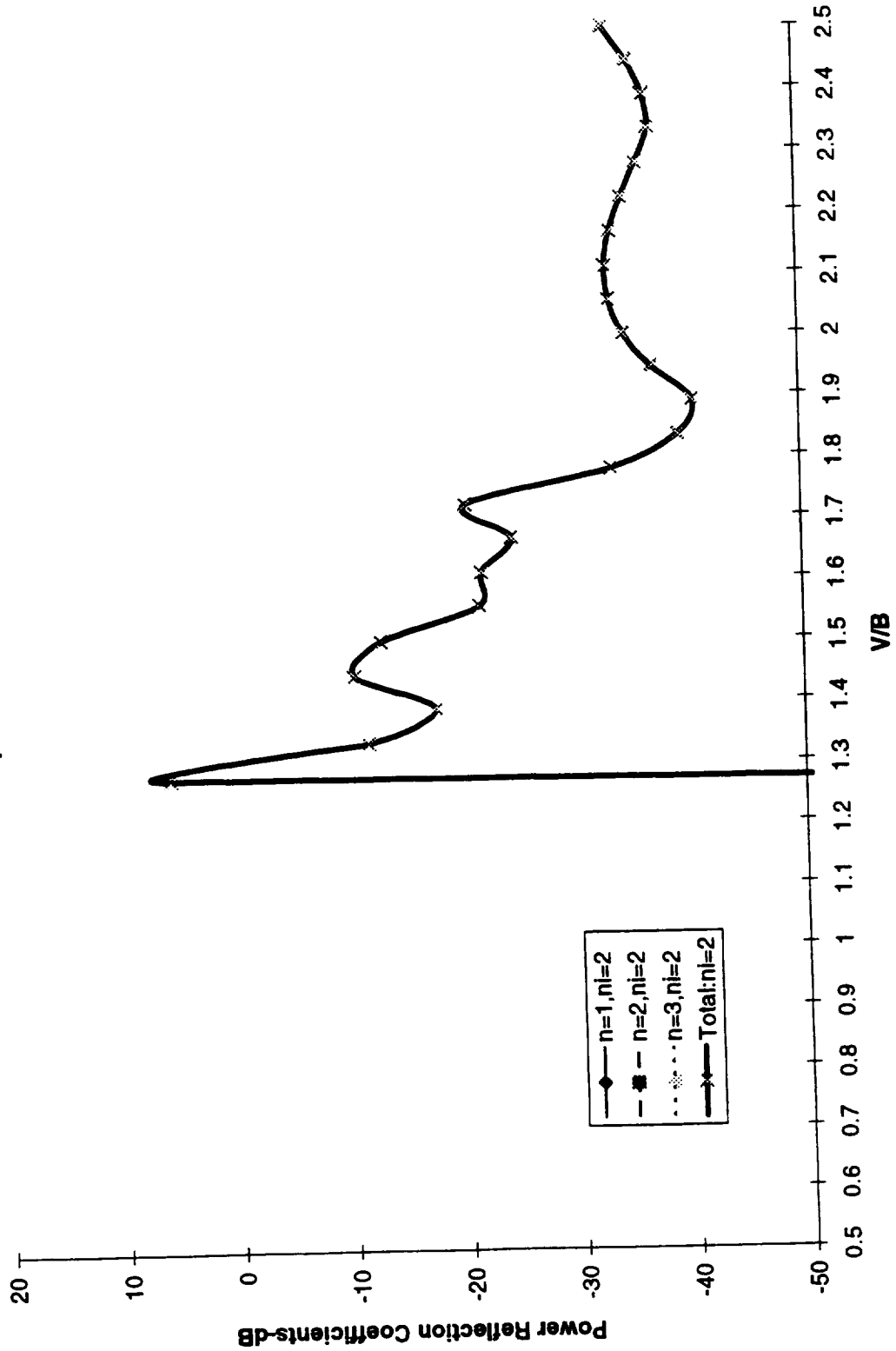
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

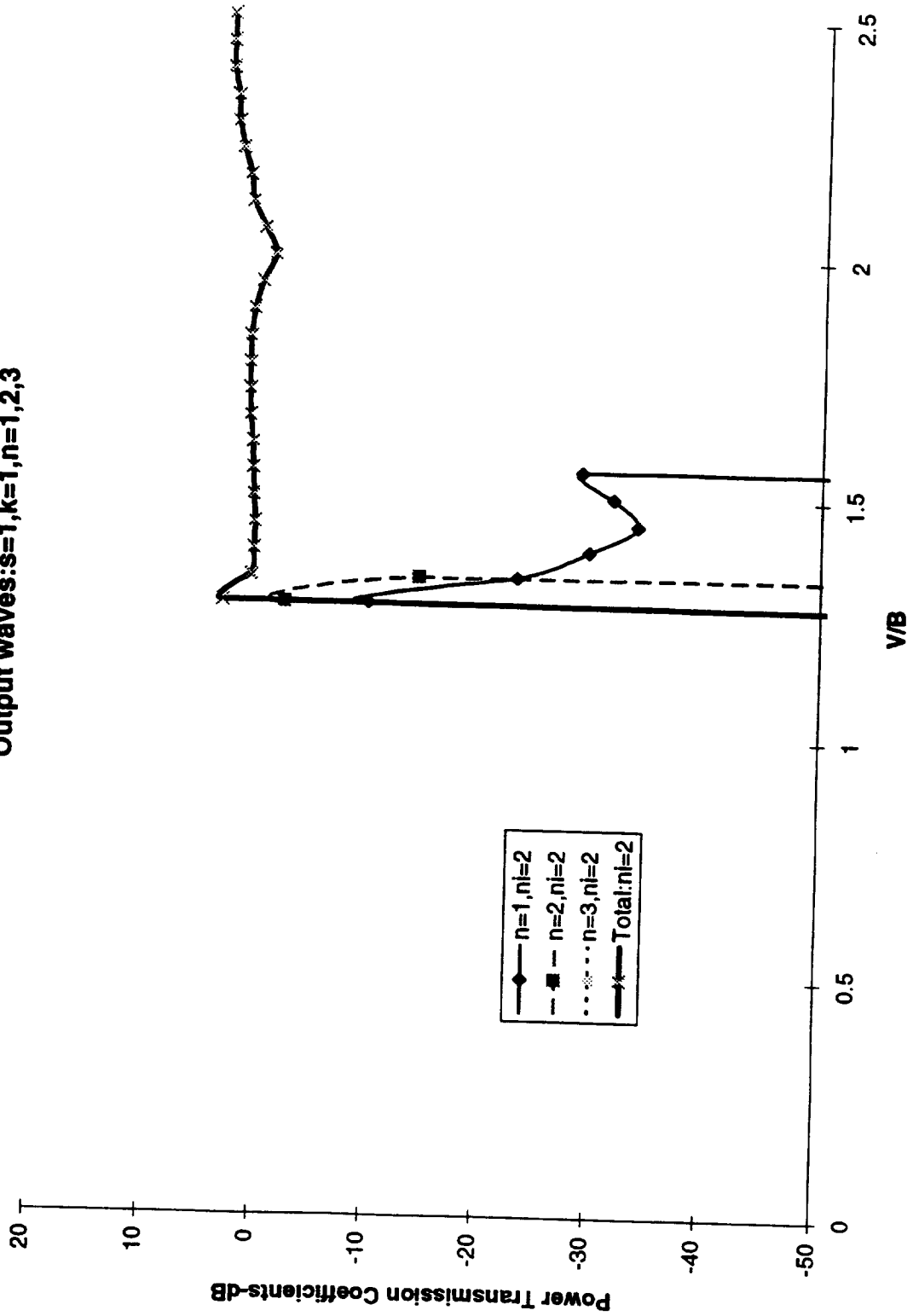
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

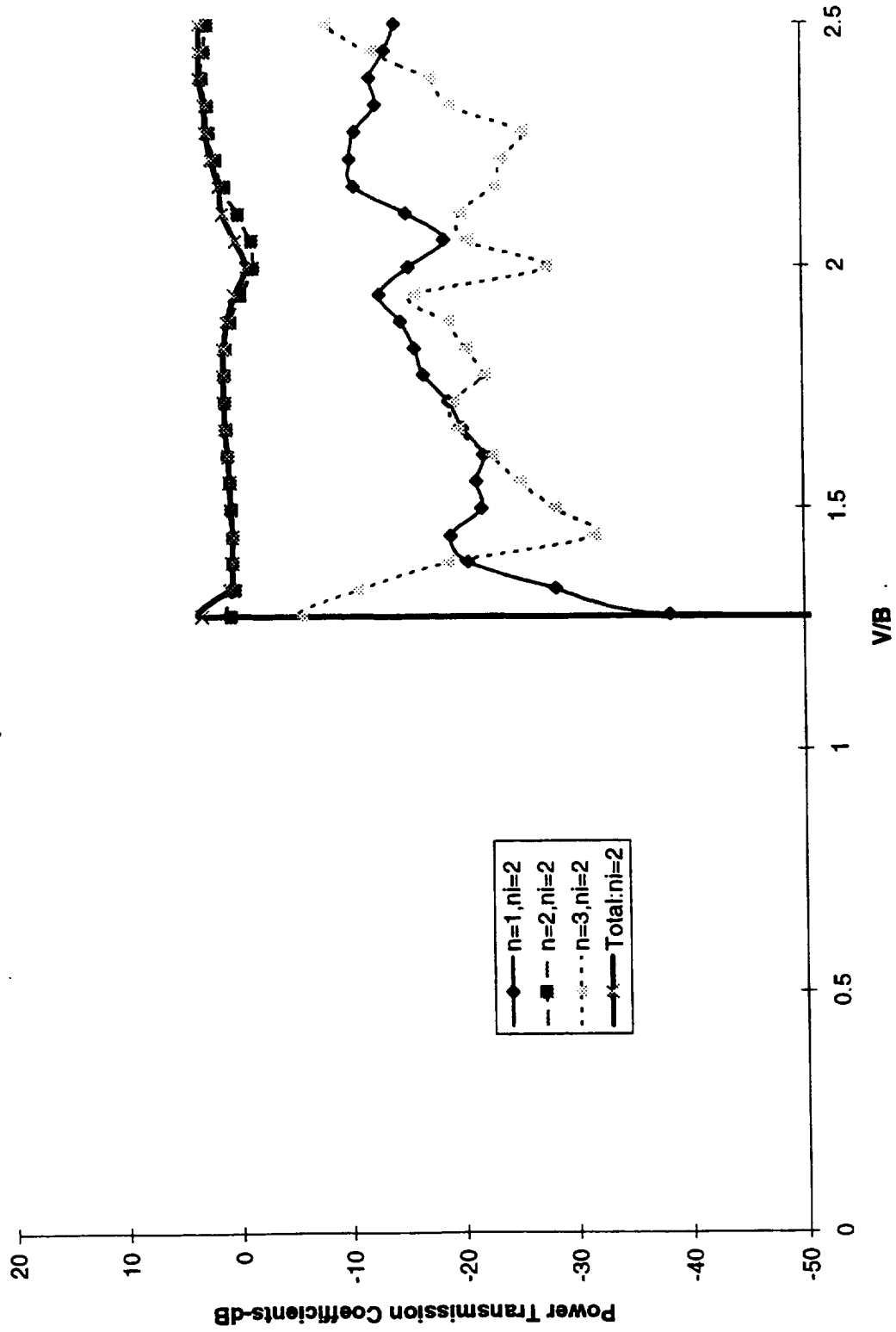
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

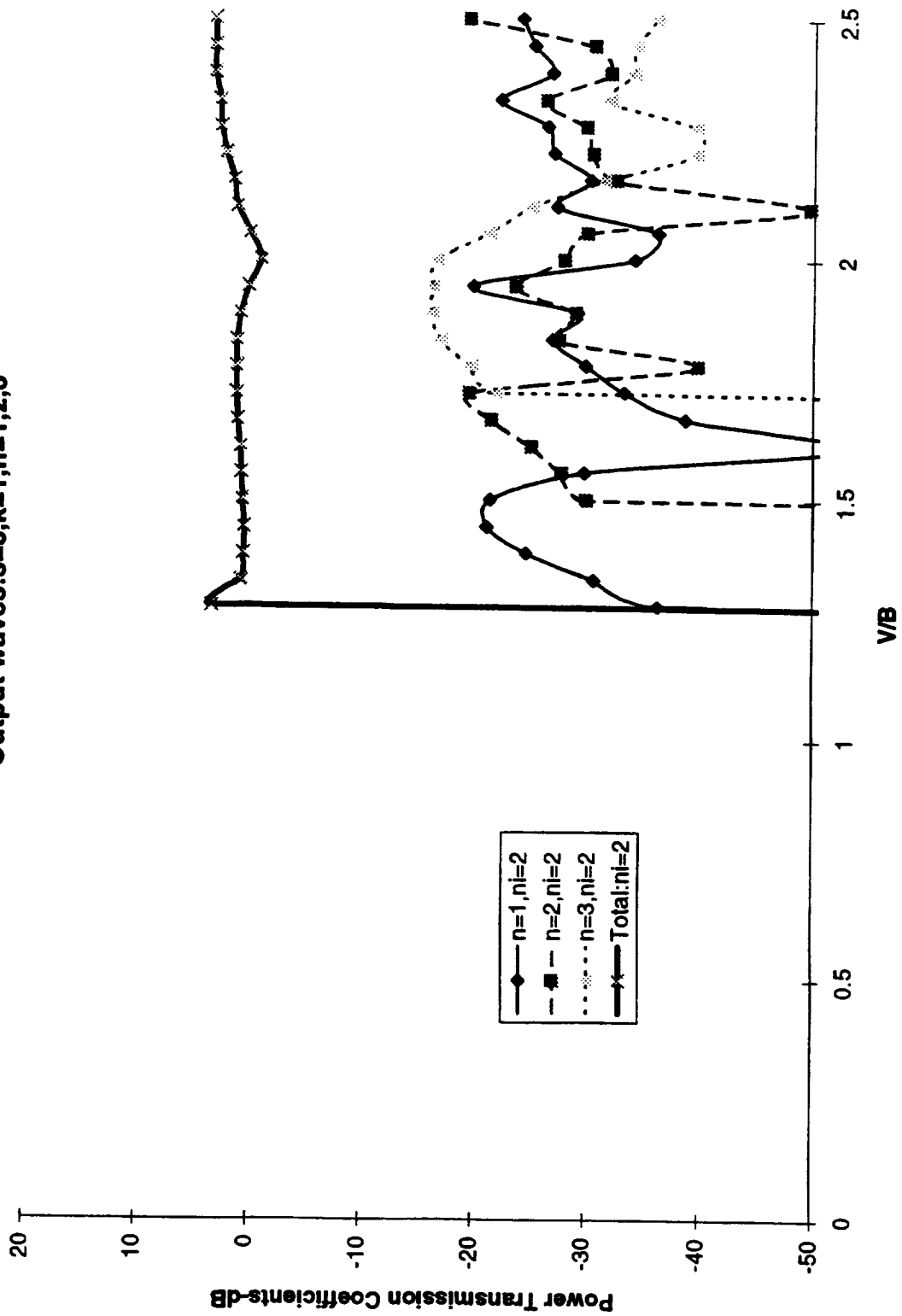
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=2, k_l=1, n_l=2$

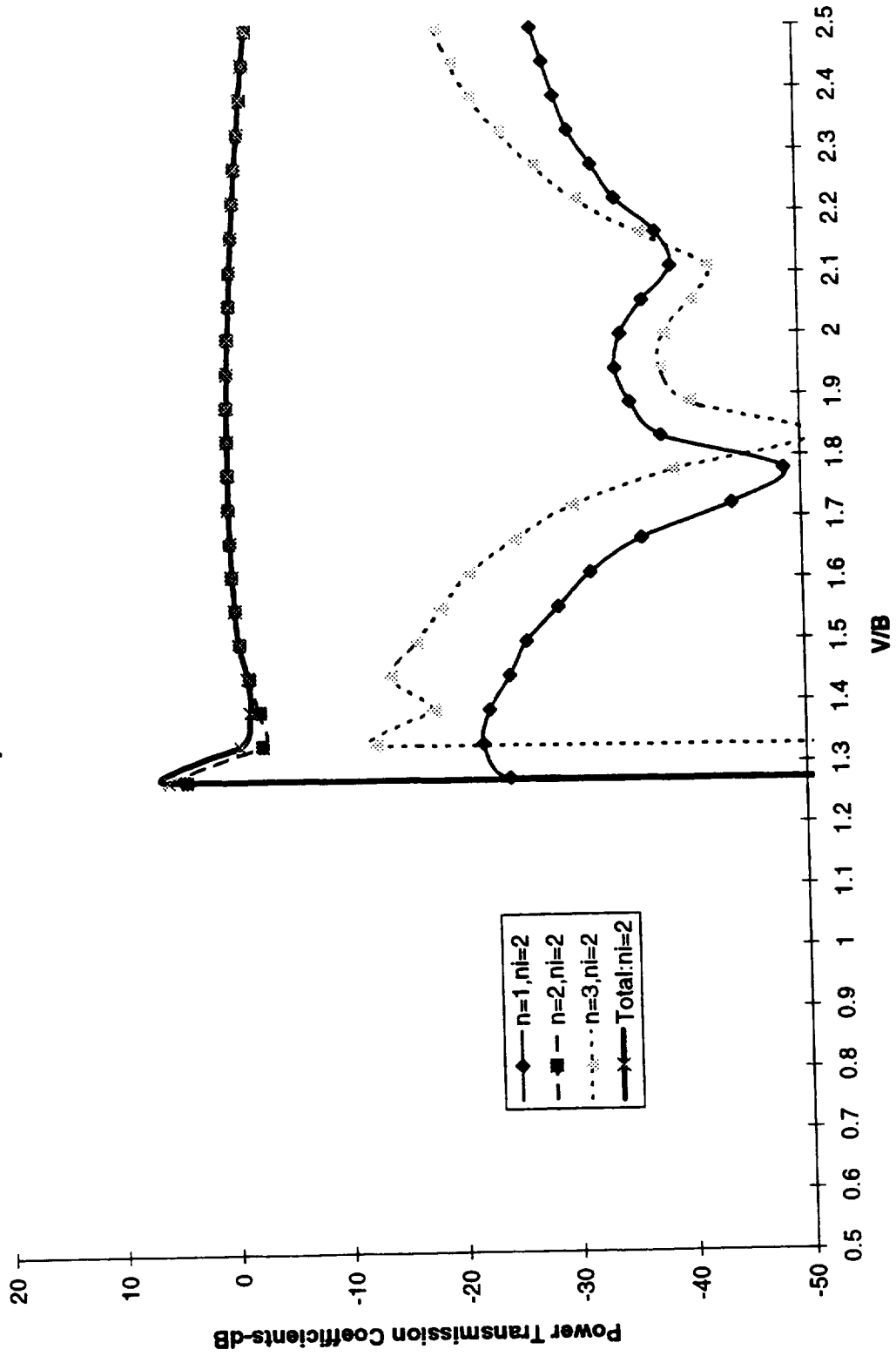
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

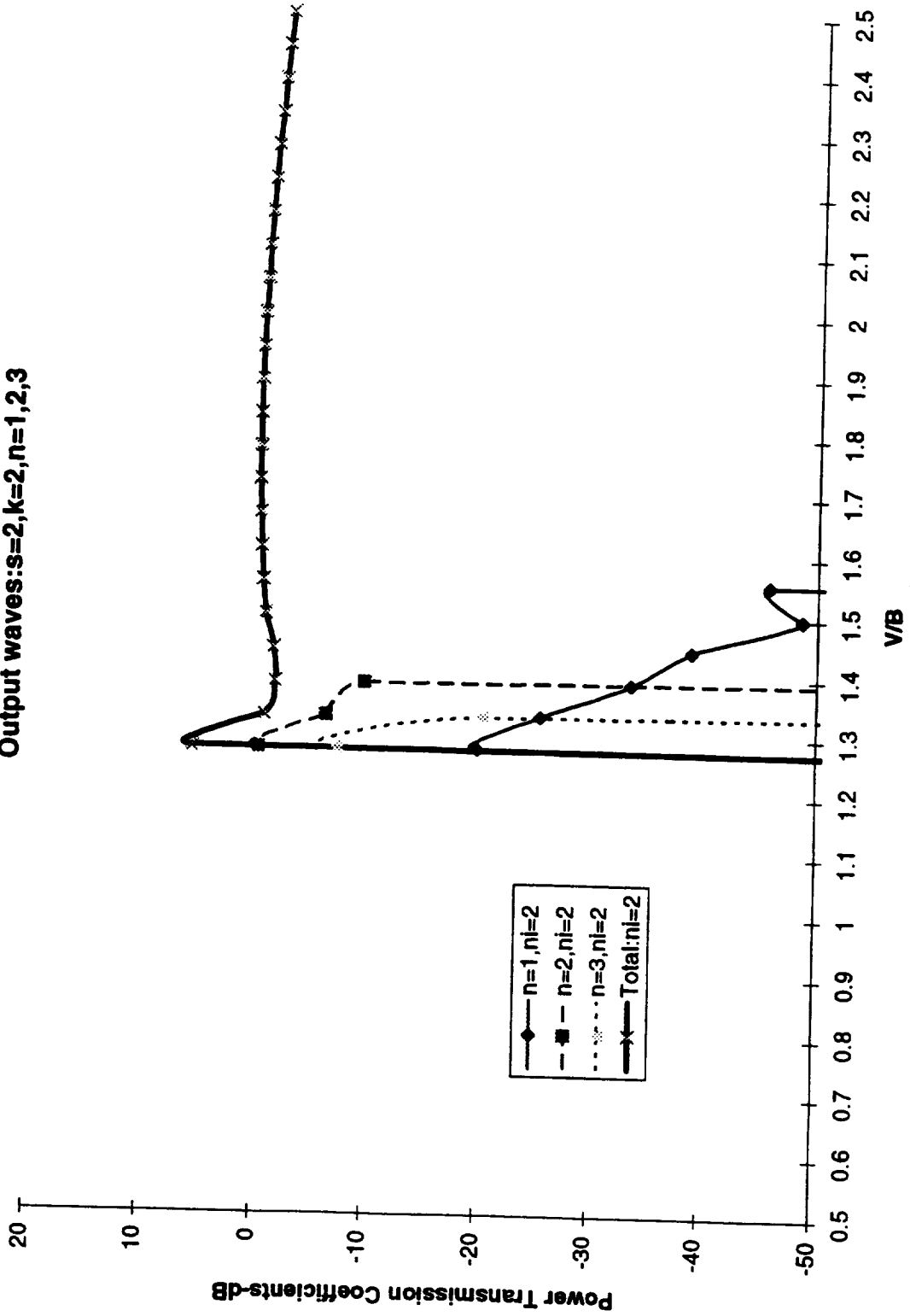
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_l=2, k_l=1, n_l=2$

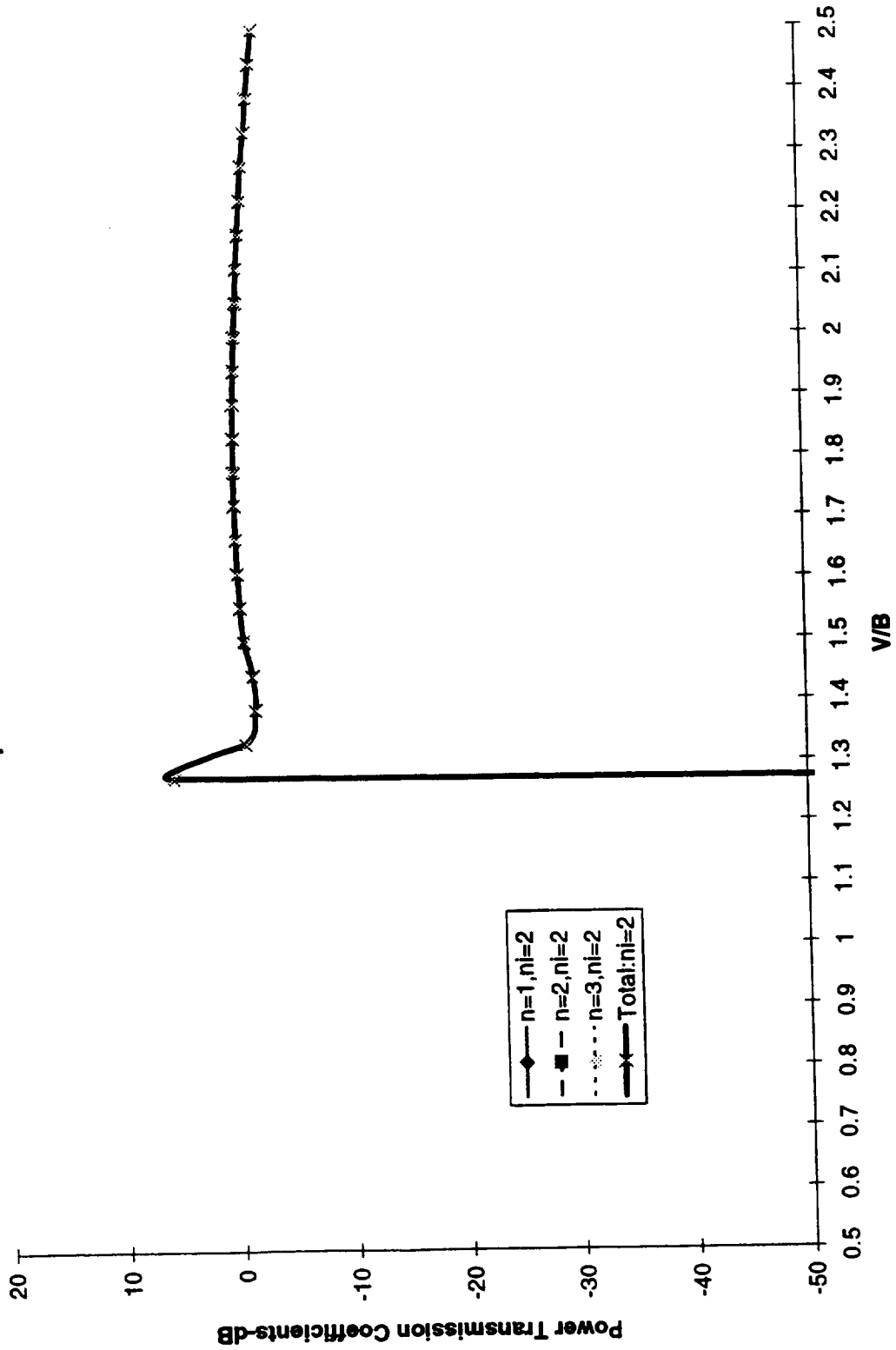
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=2$

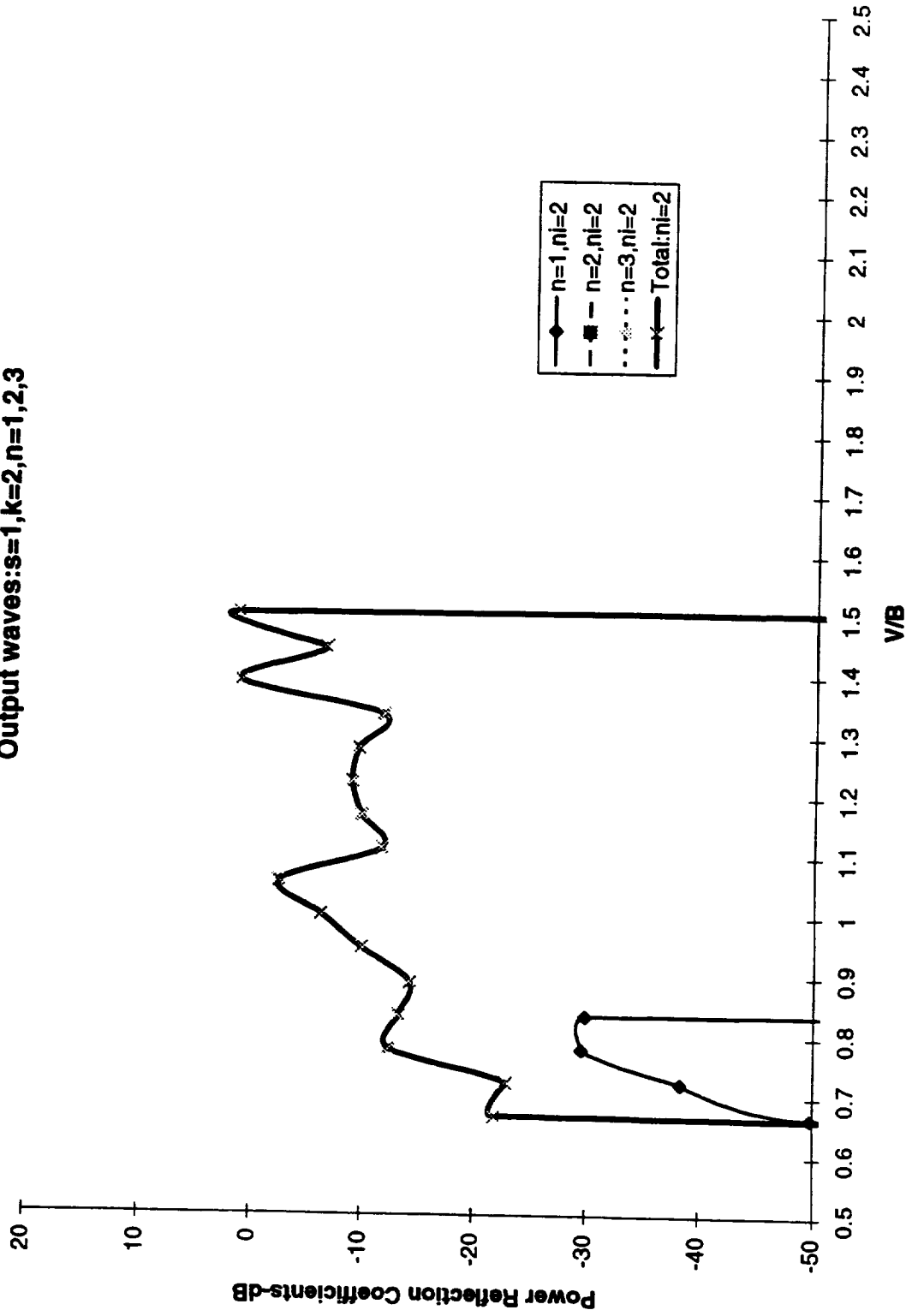
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

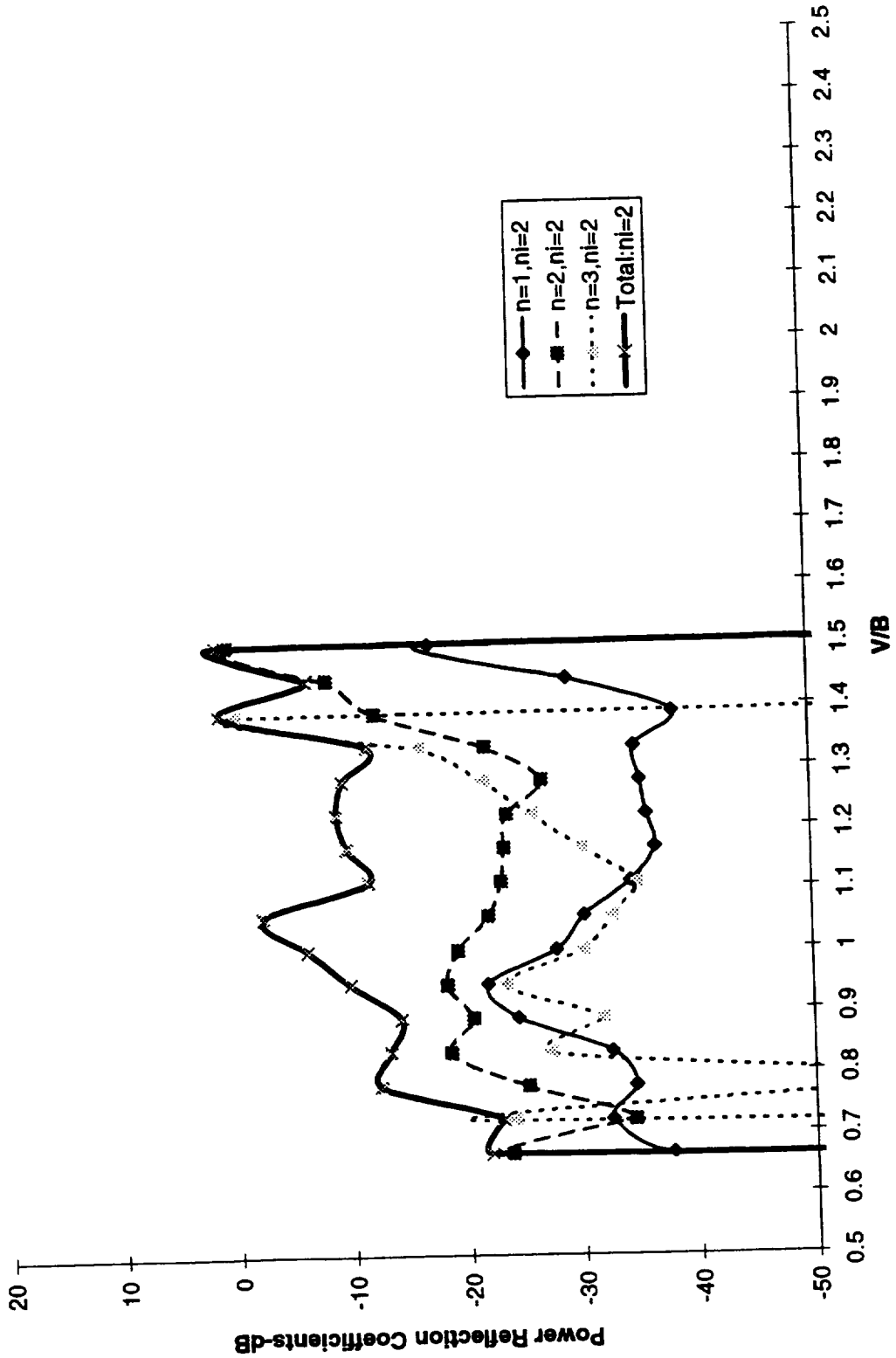
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=2, k_l=2, n_l=2$

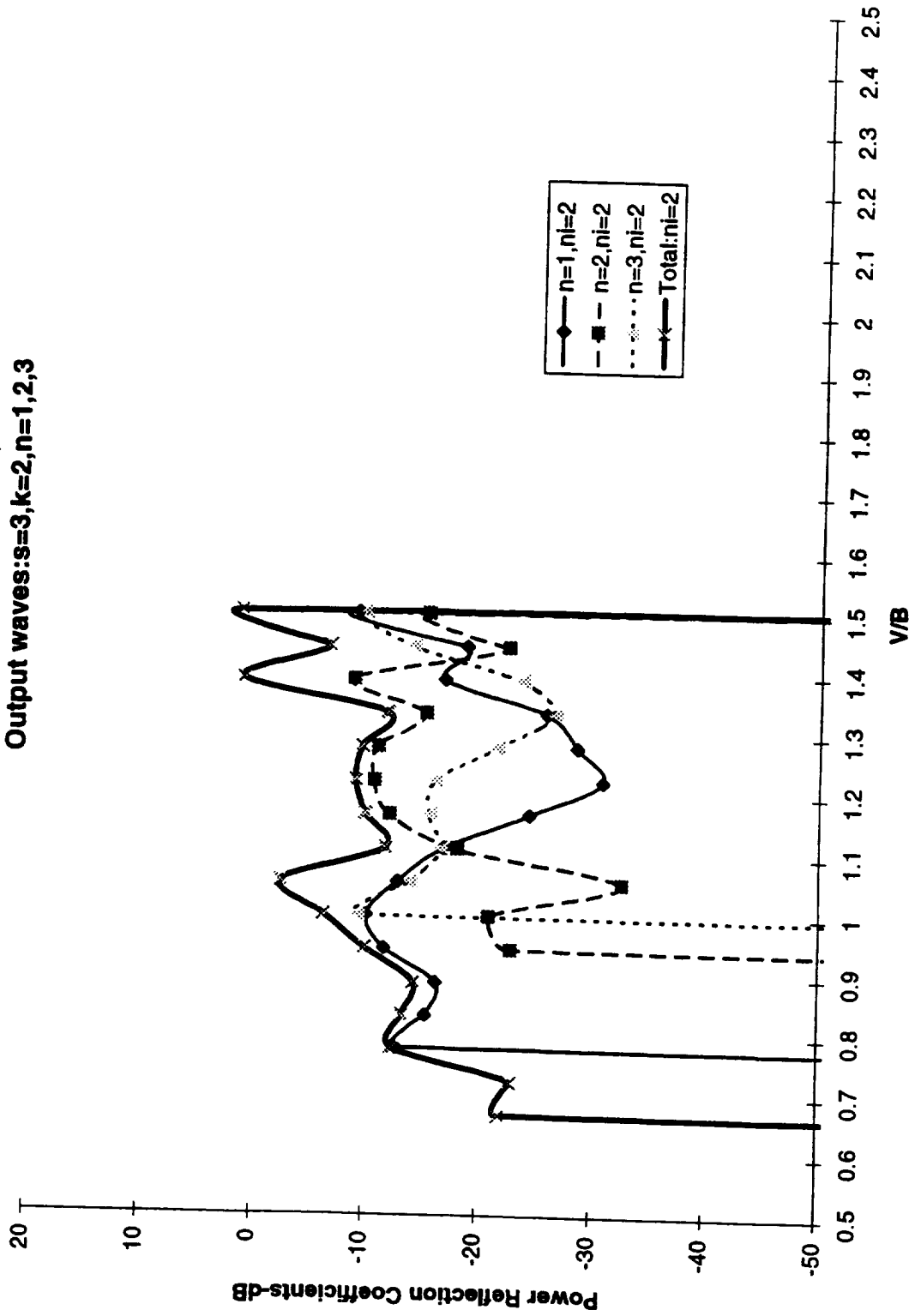
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

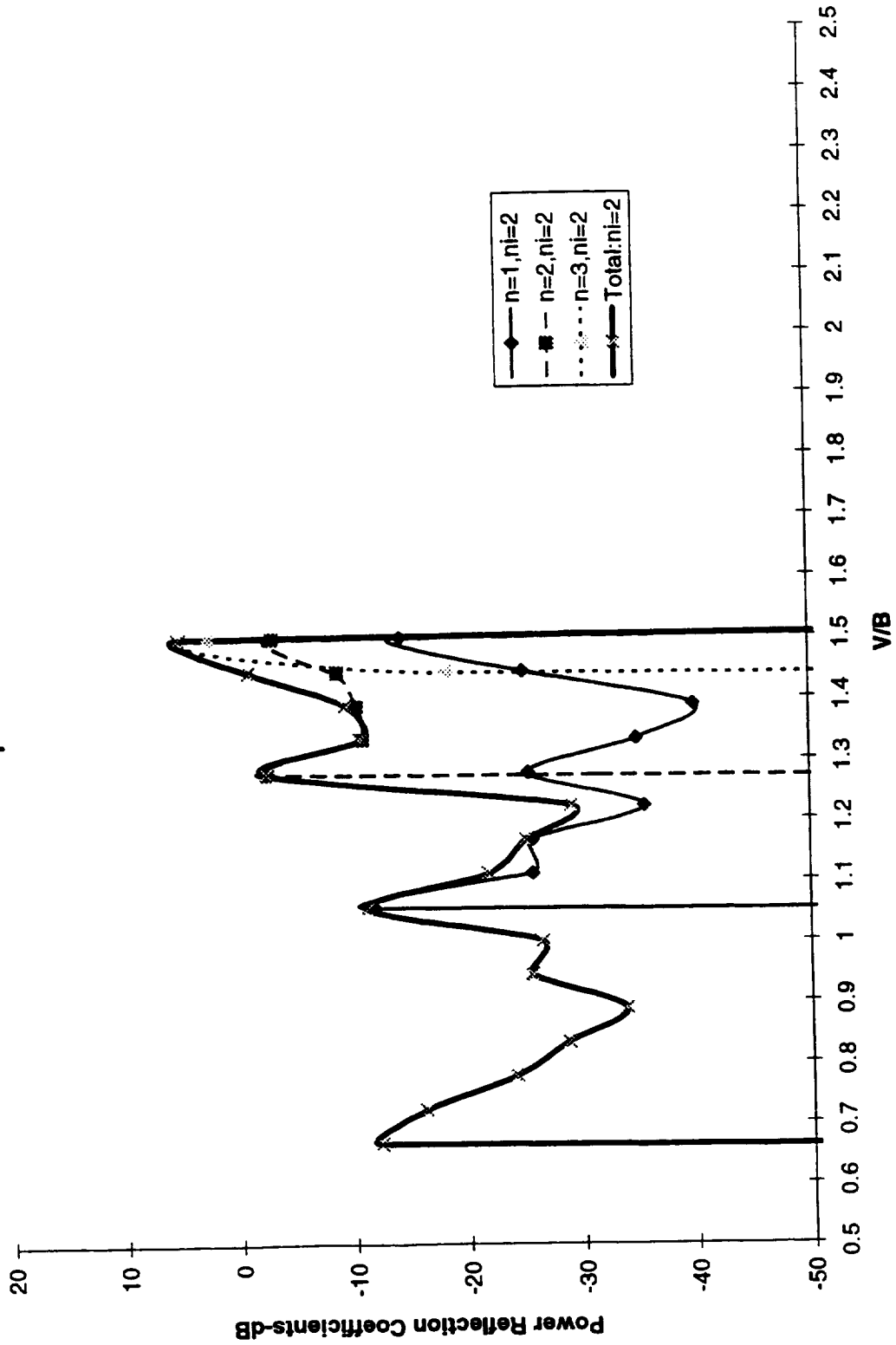
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

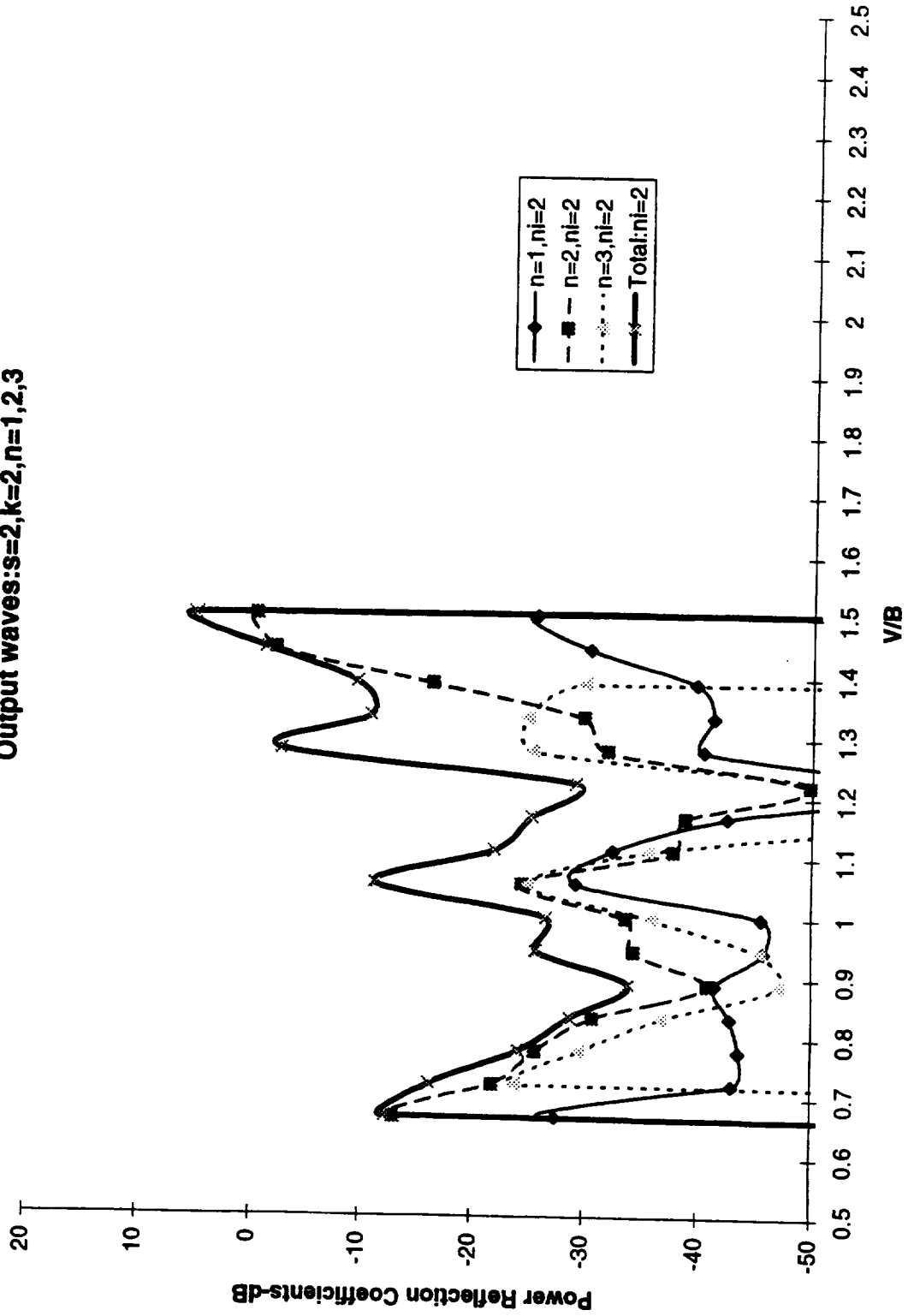
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

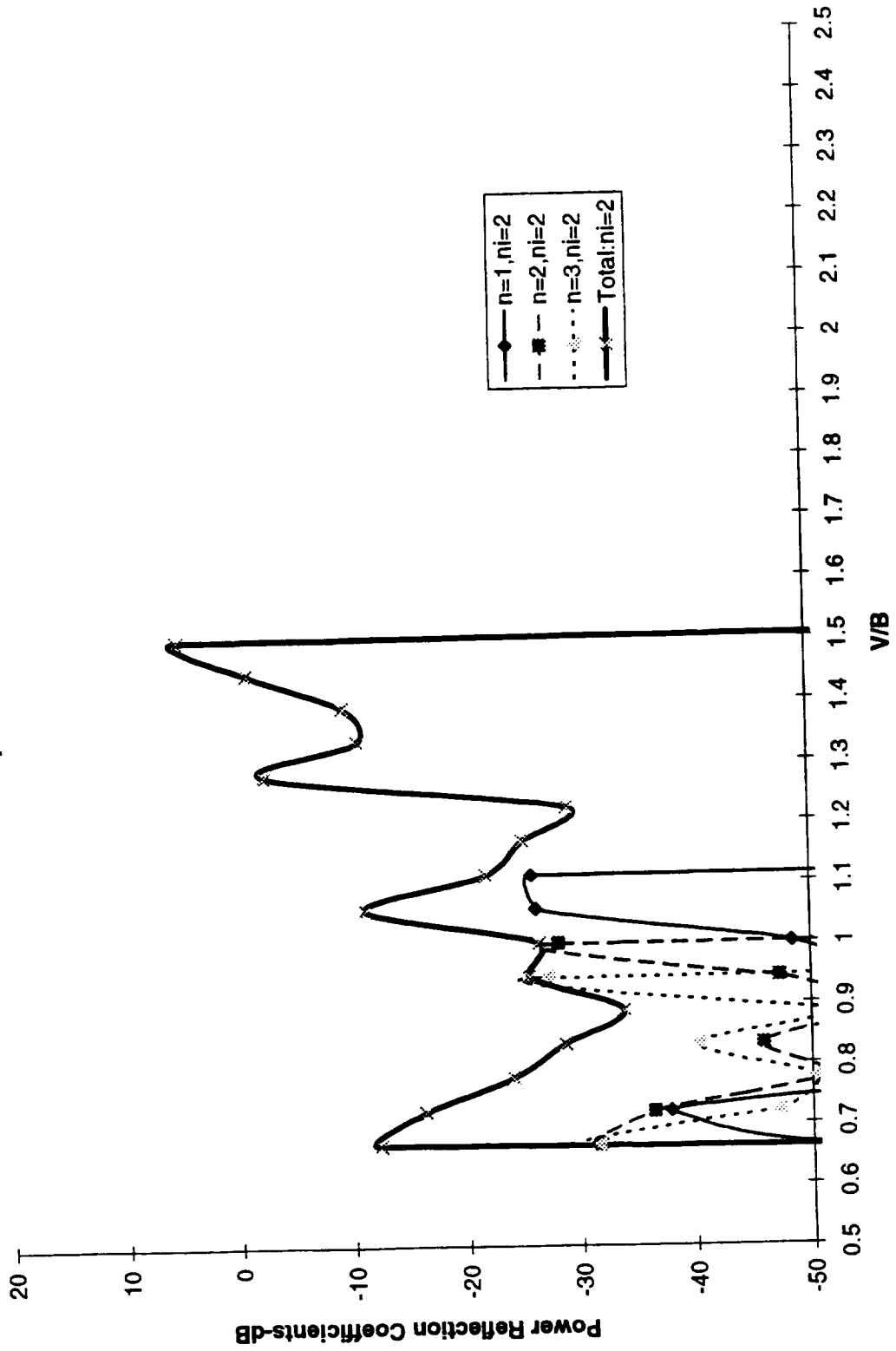
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_l=2, k_l=2, n_l=2$

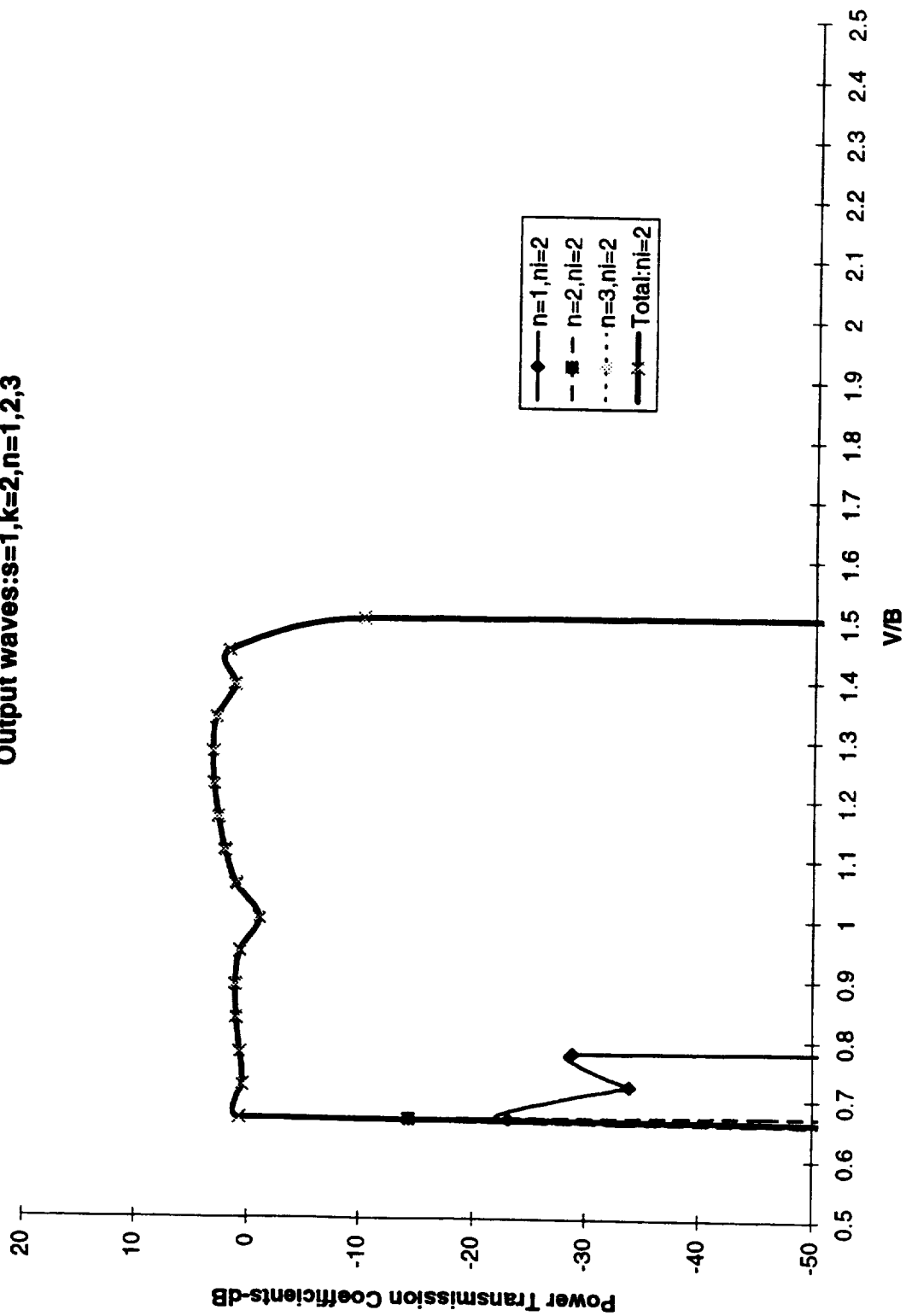
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

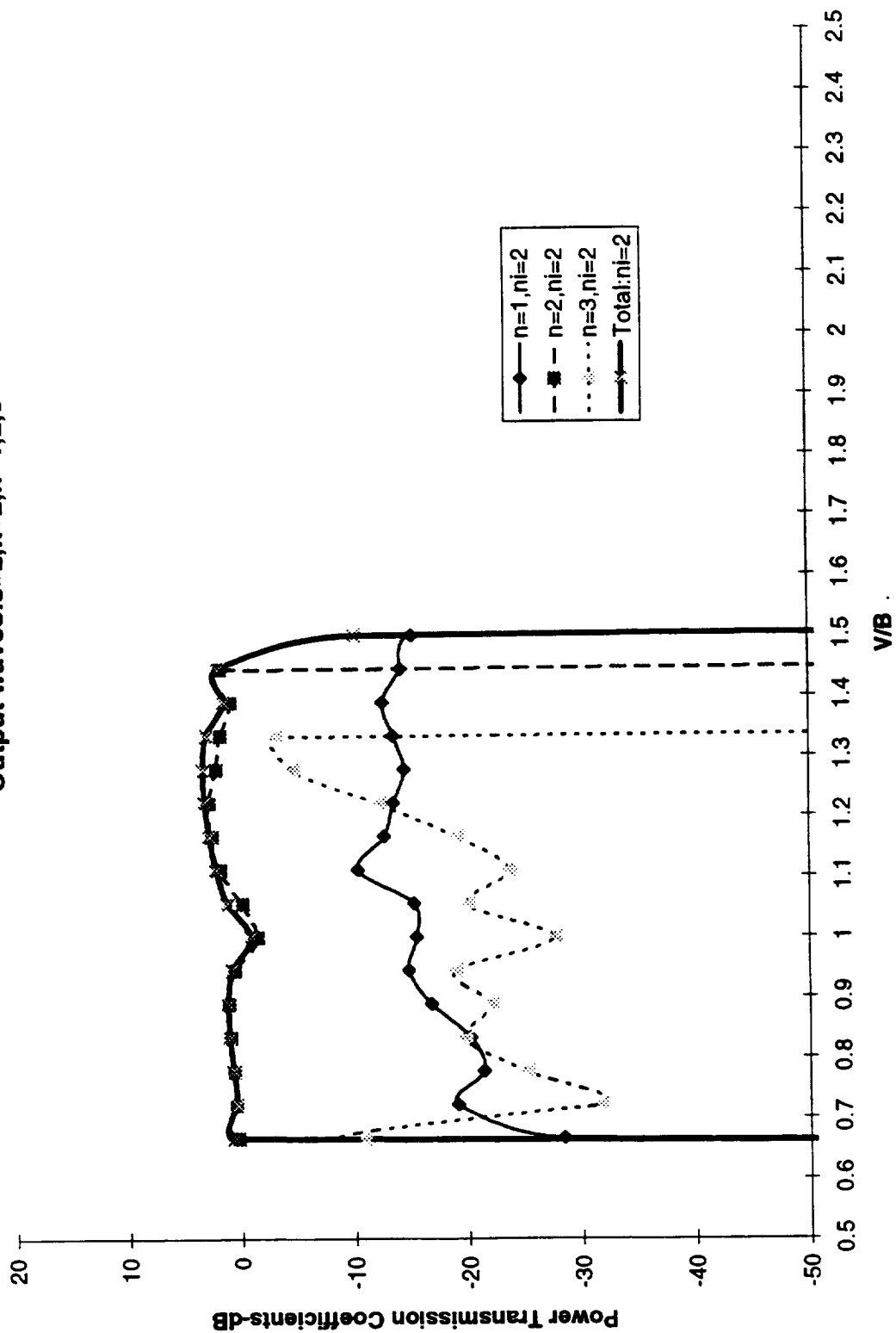
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

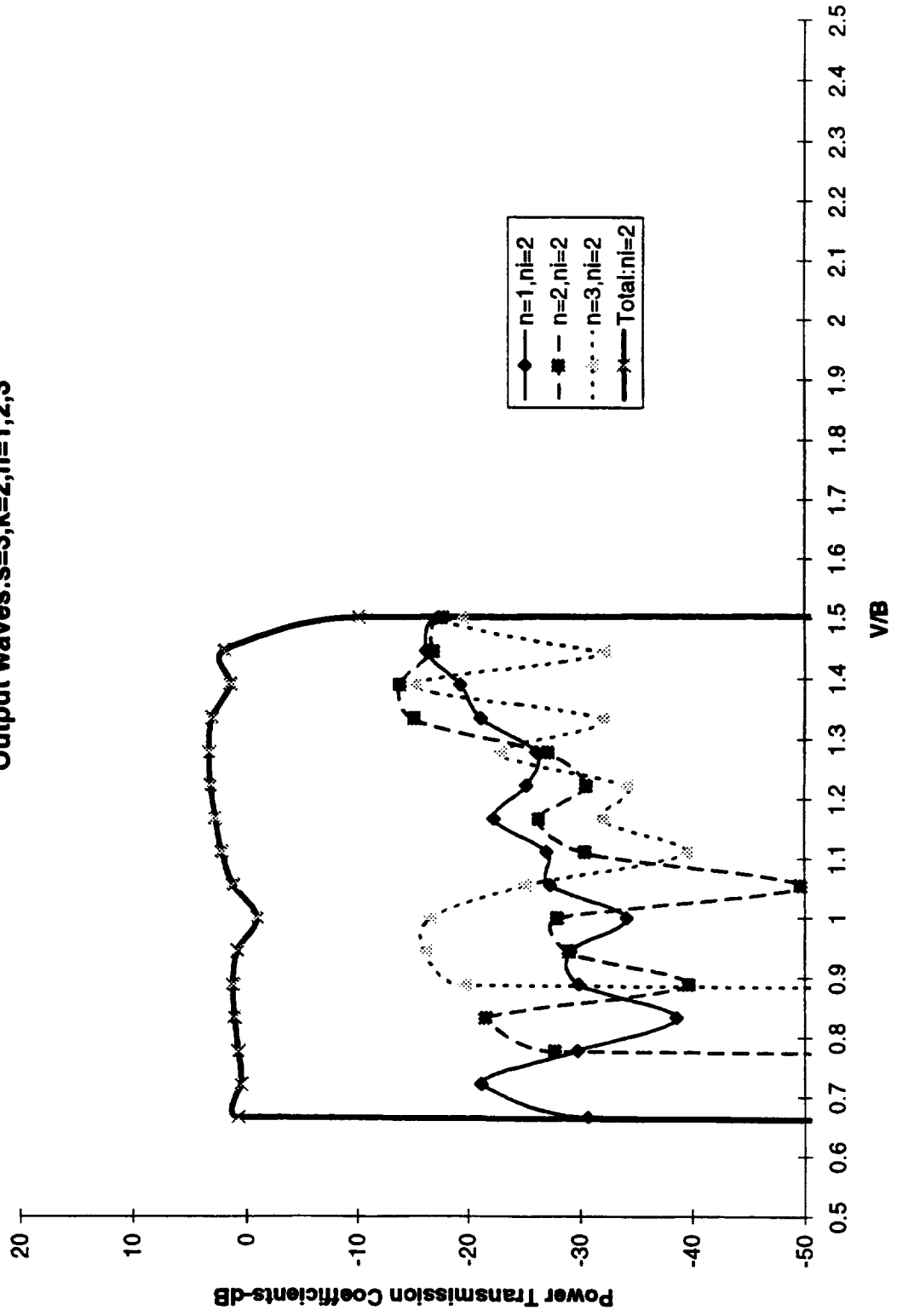
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

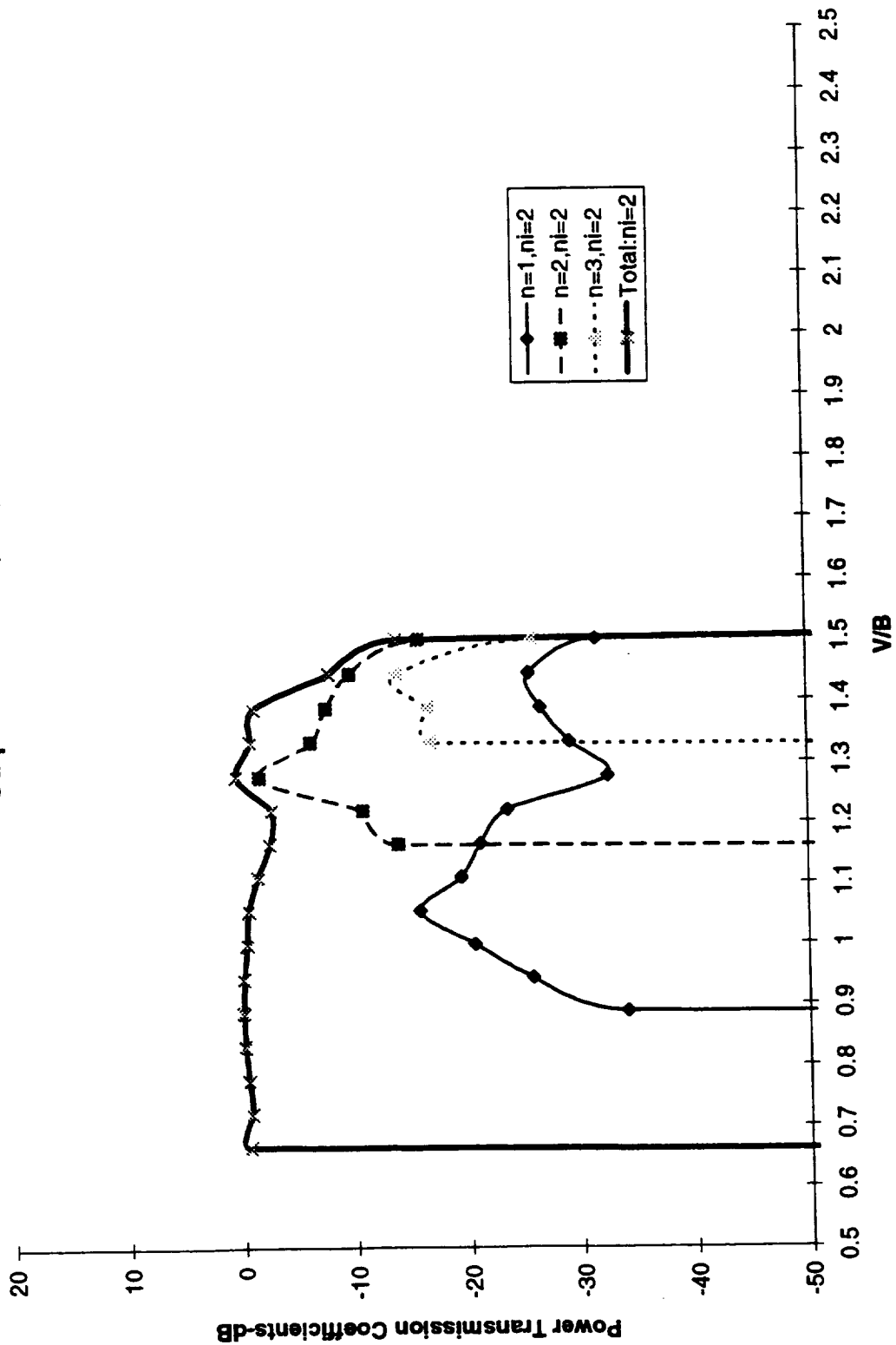
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_l=2, k_l=2, n_l=2$

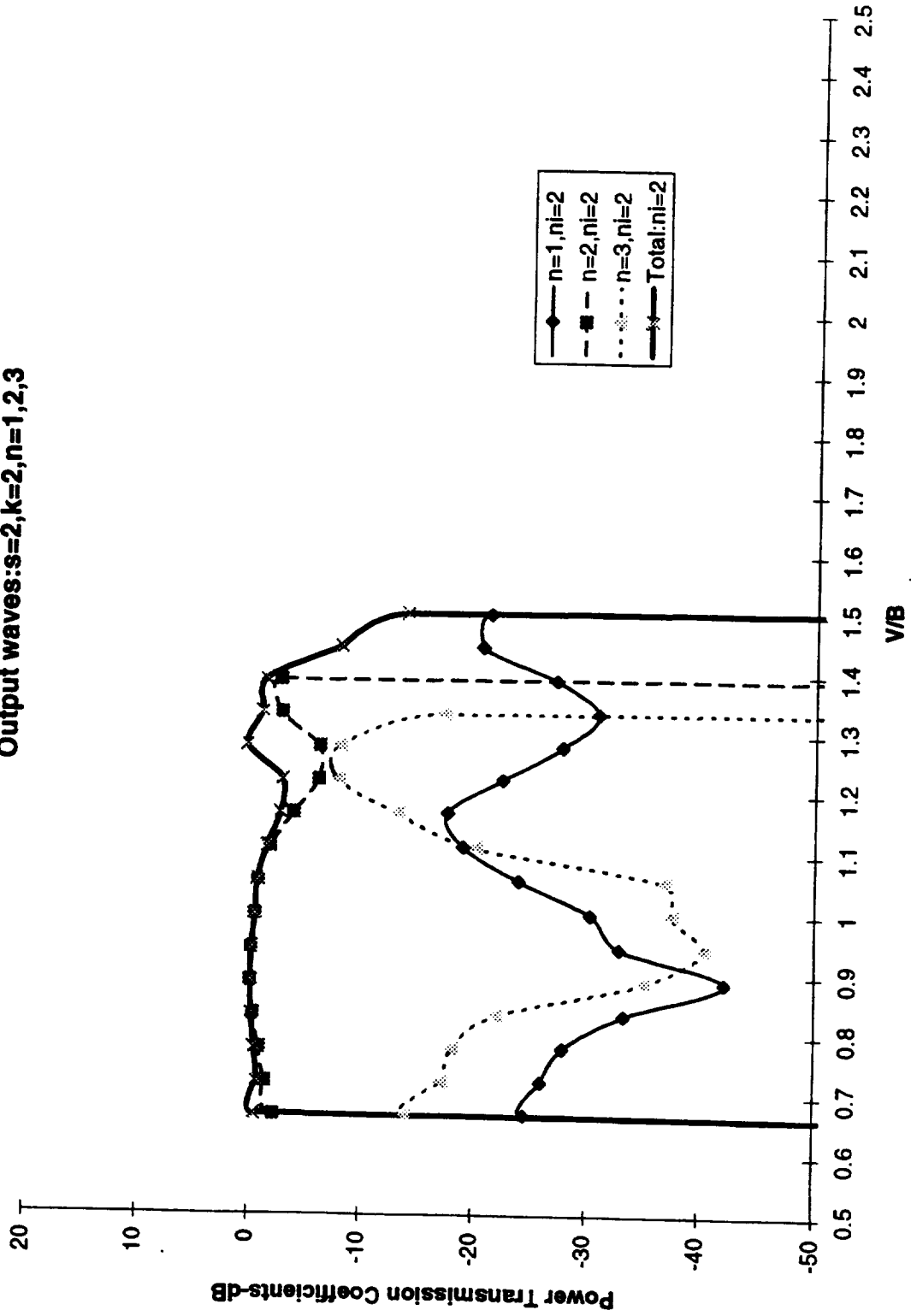
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_l=2, k_l=2, n_l=2$

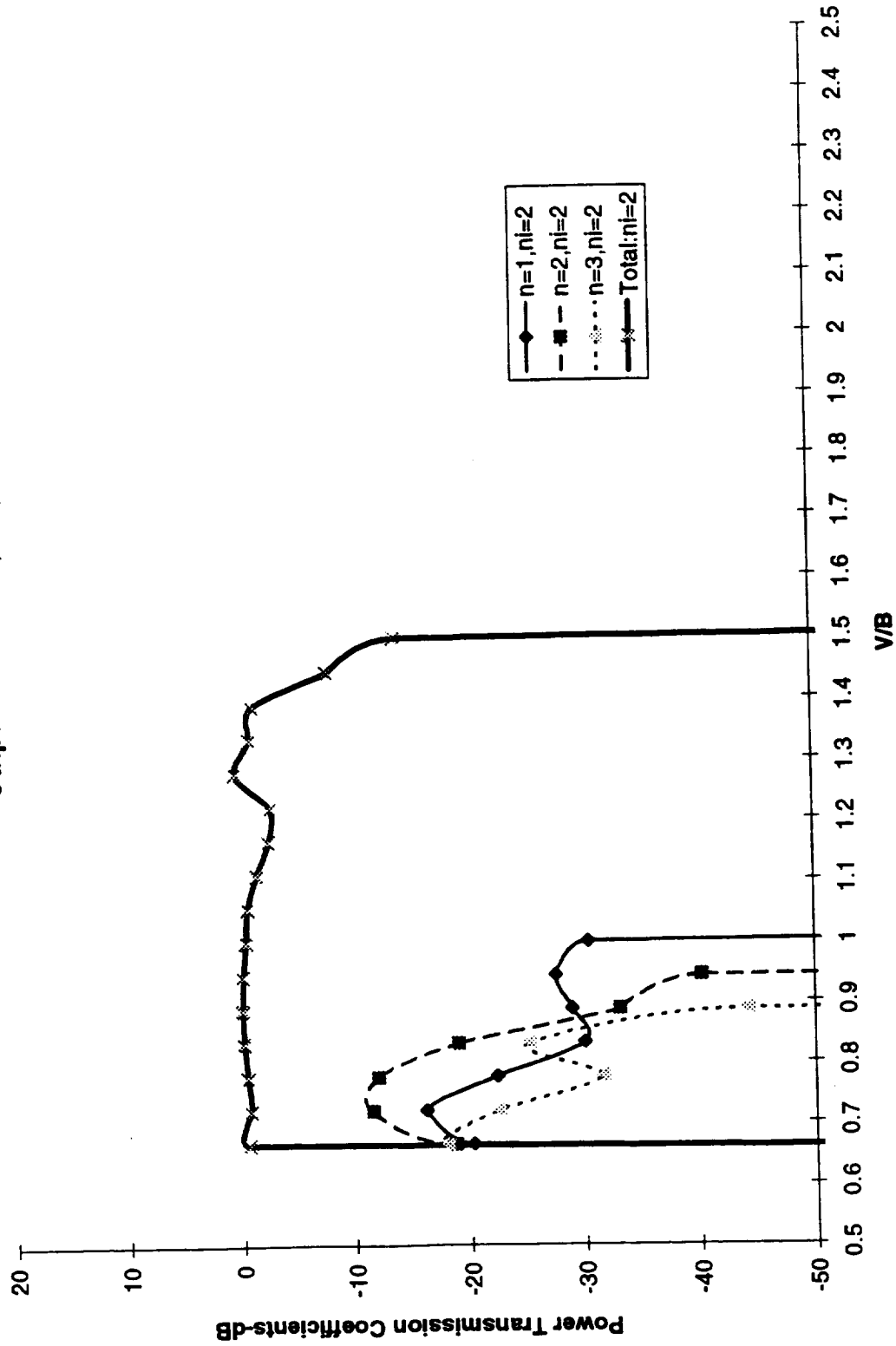
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=2$

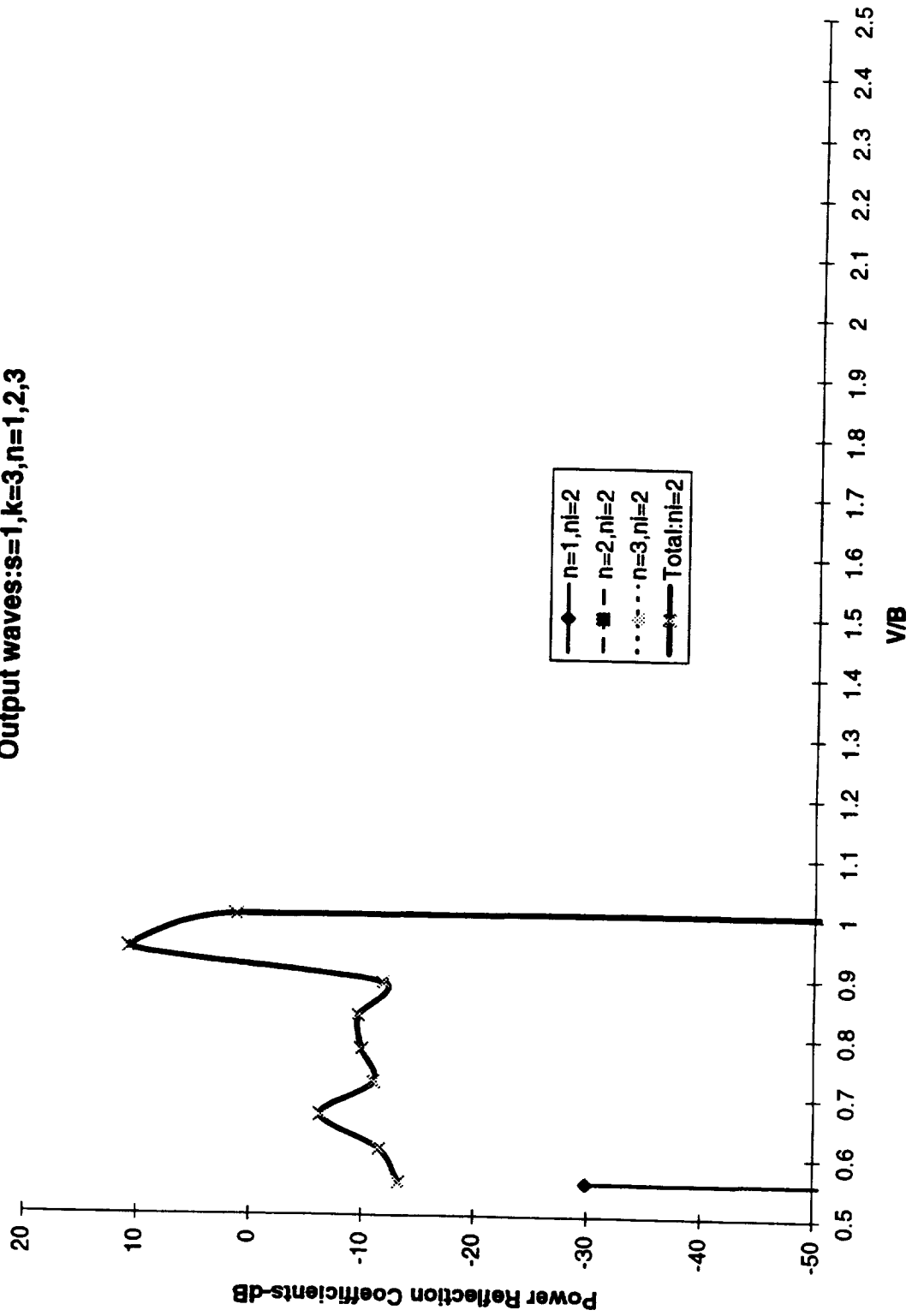
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

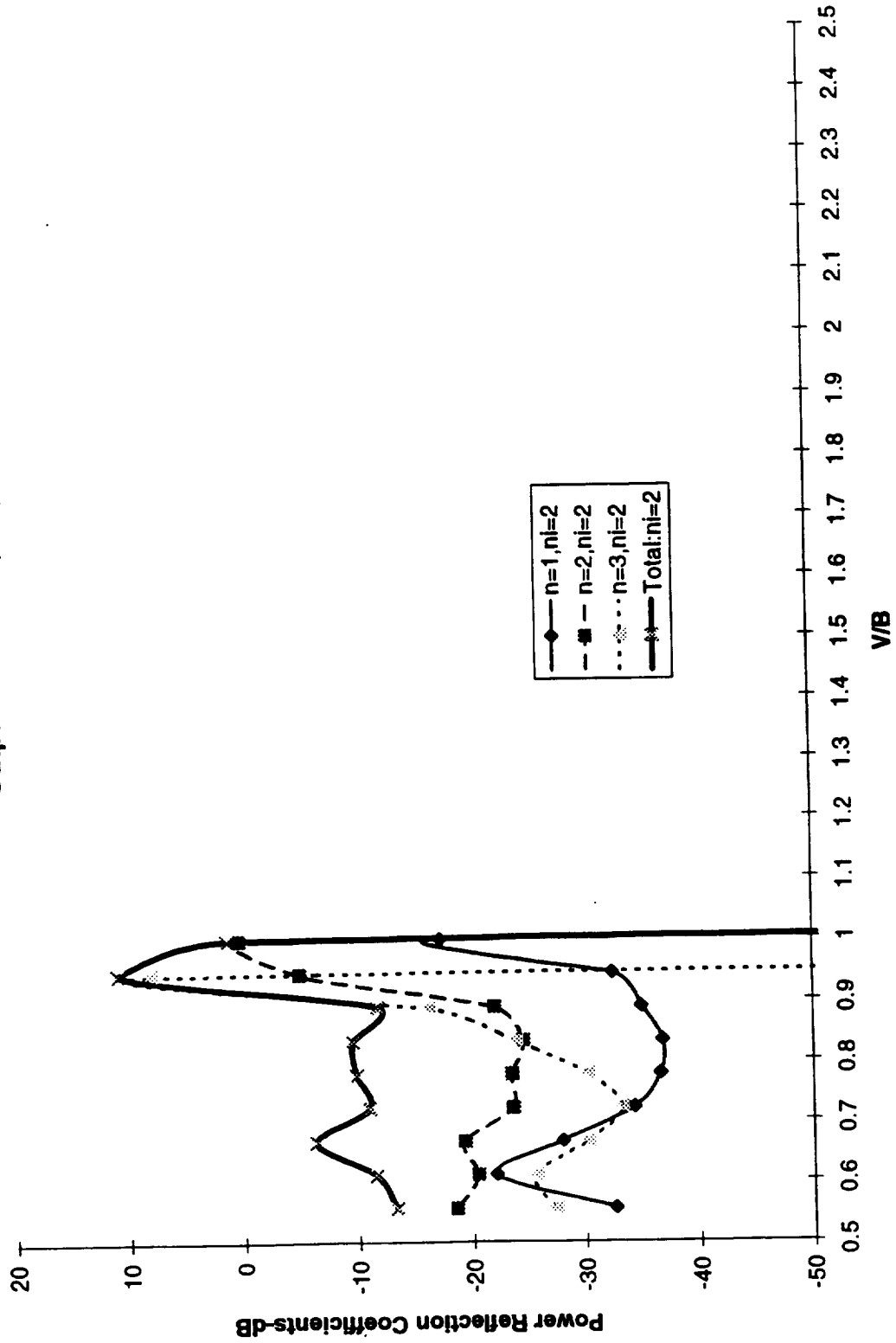
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

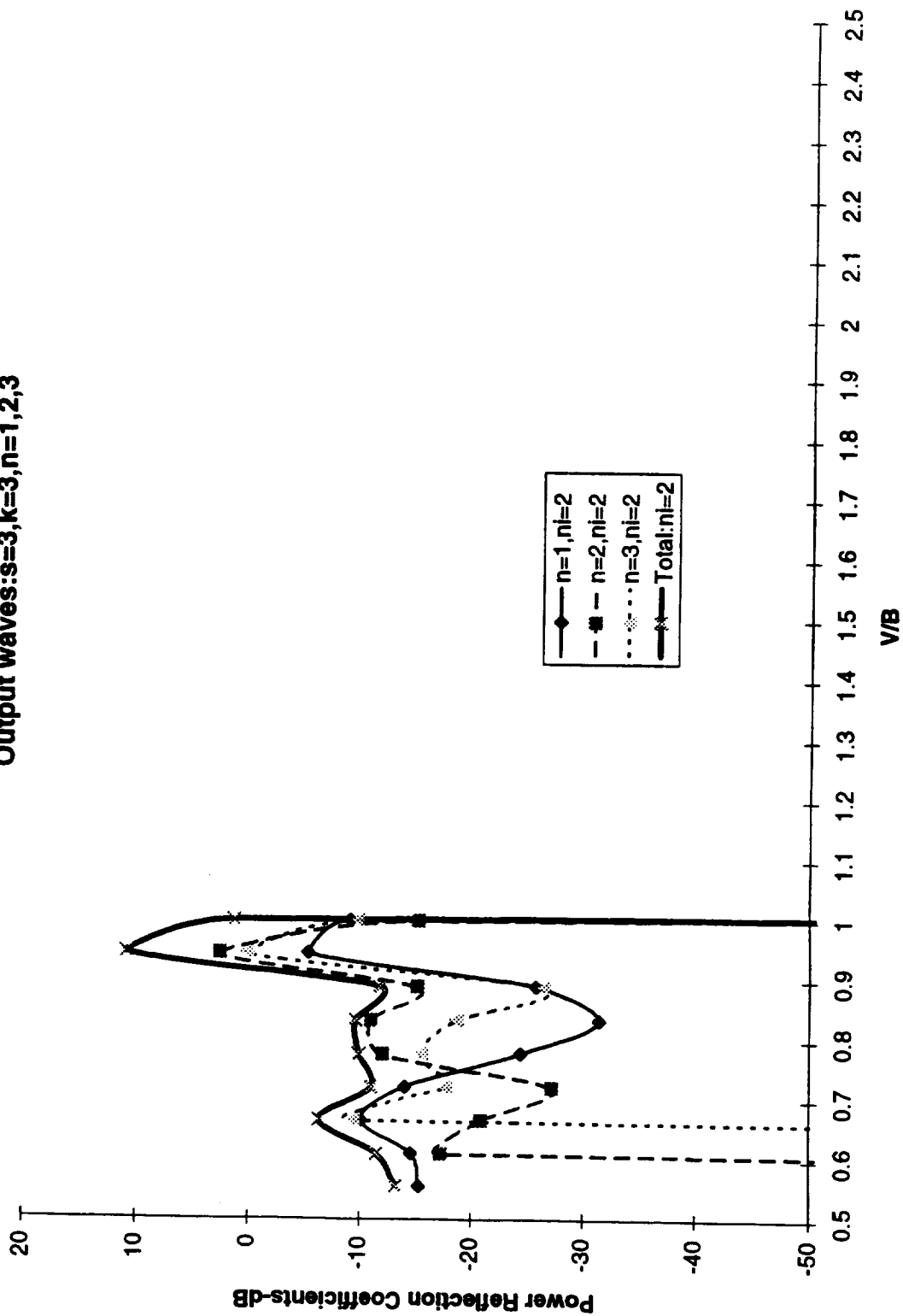
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

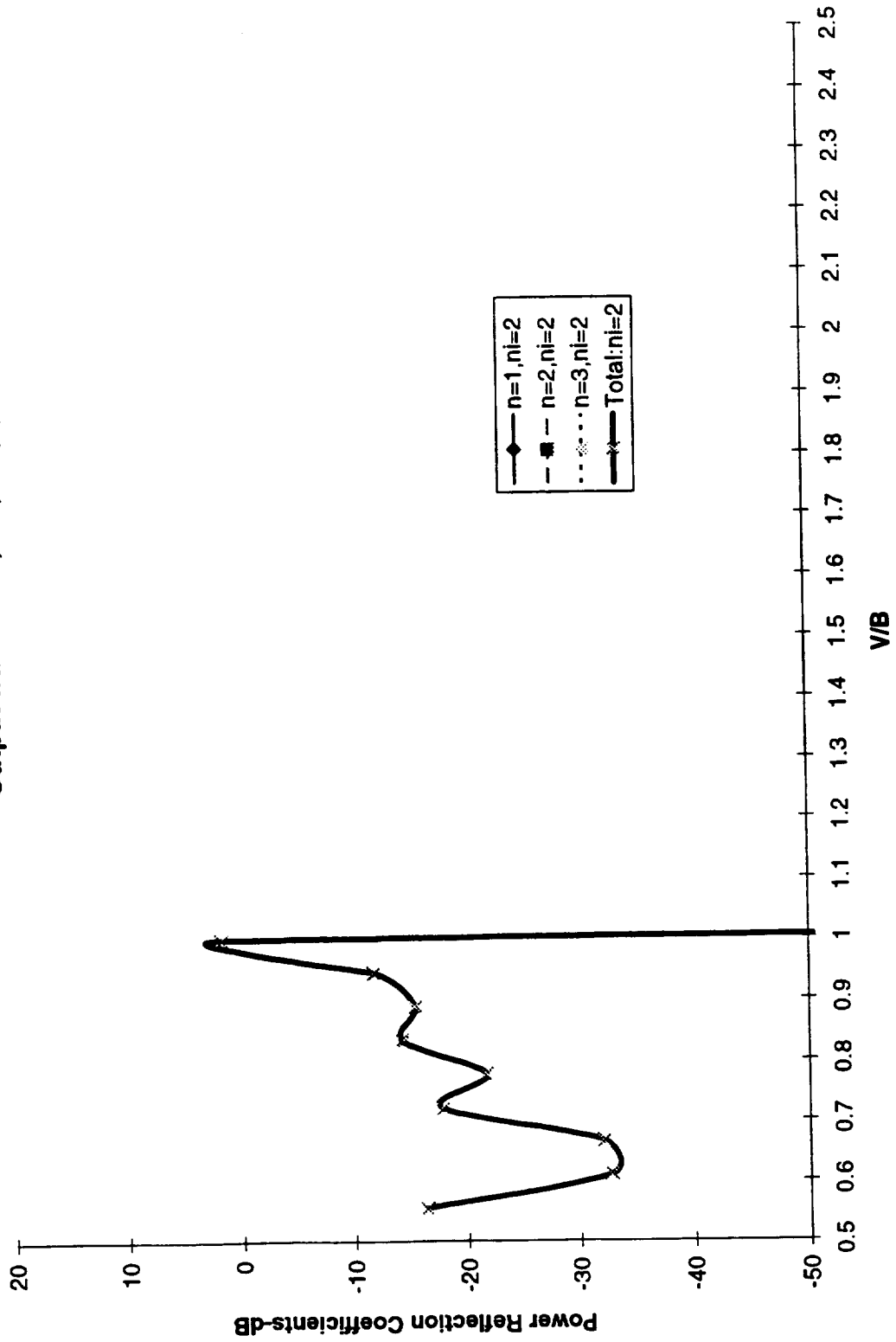
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

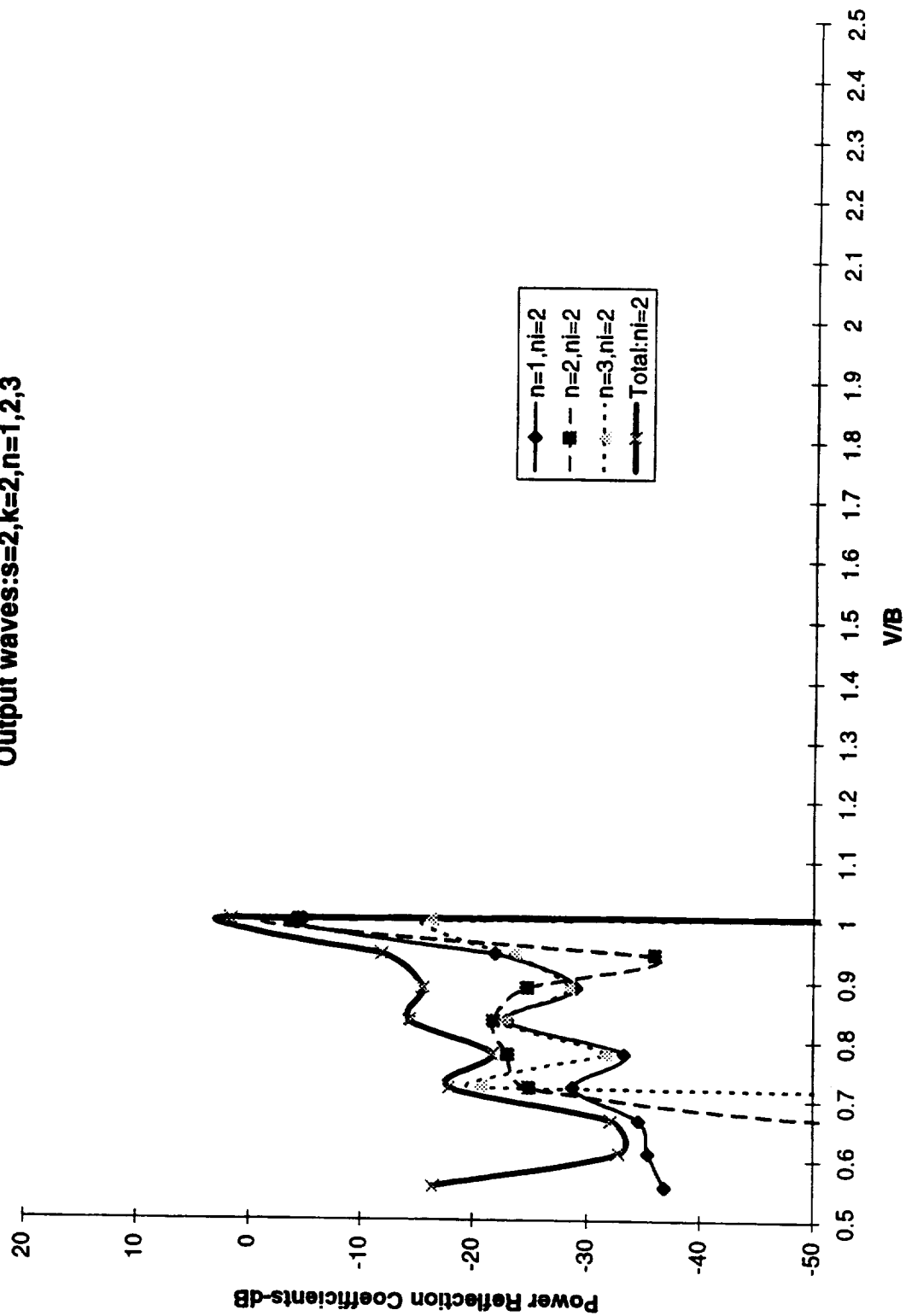
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

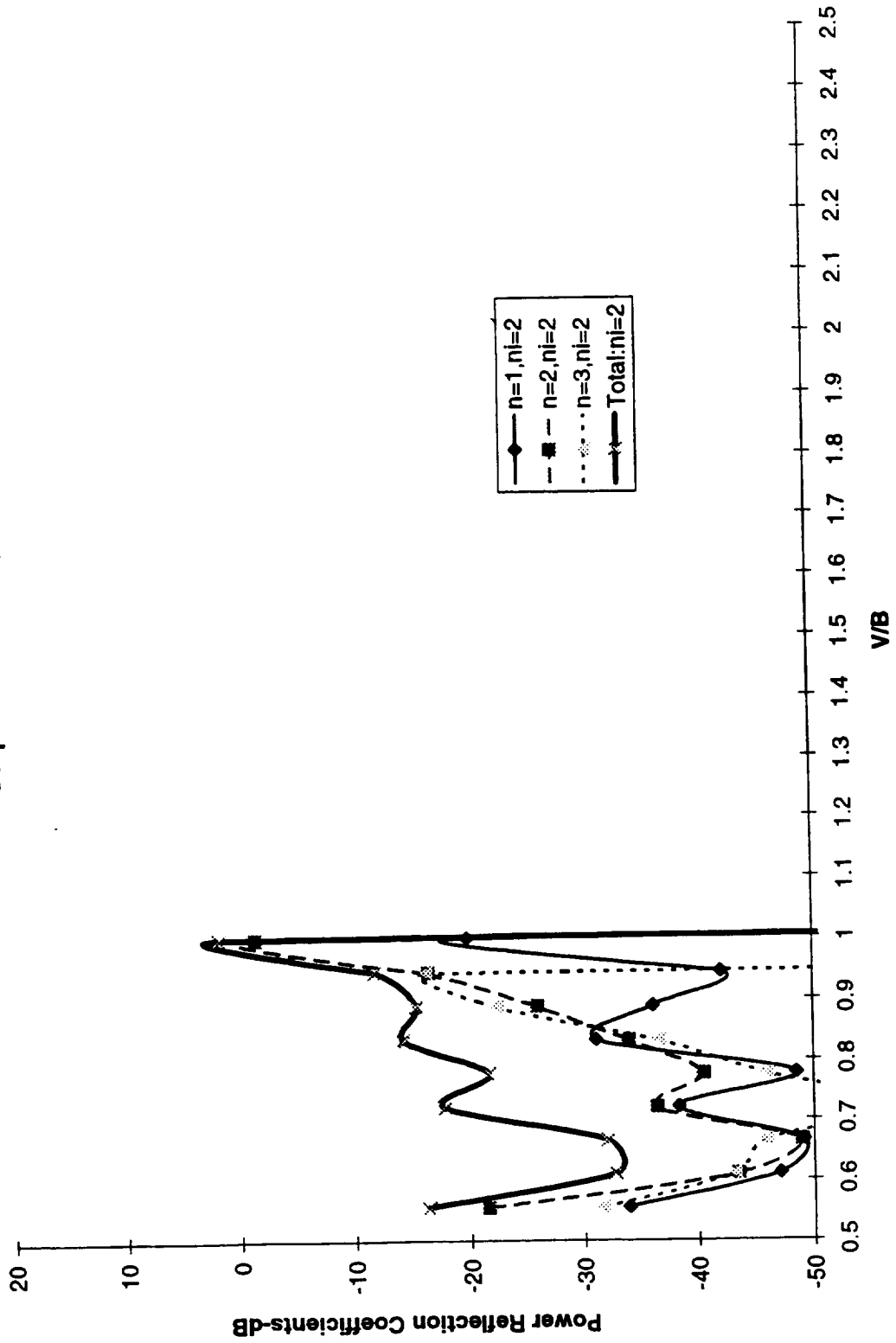
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

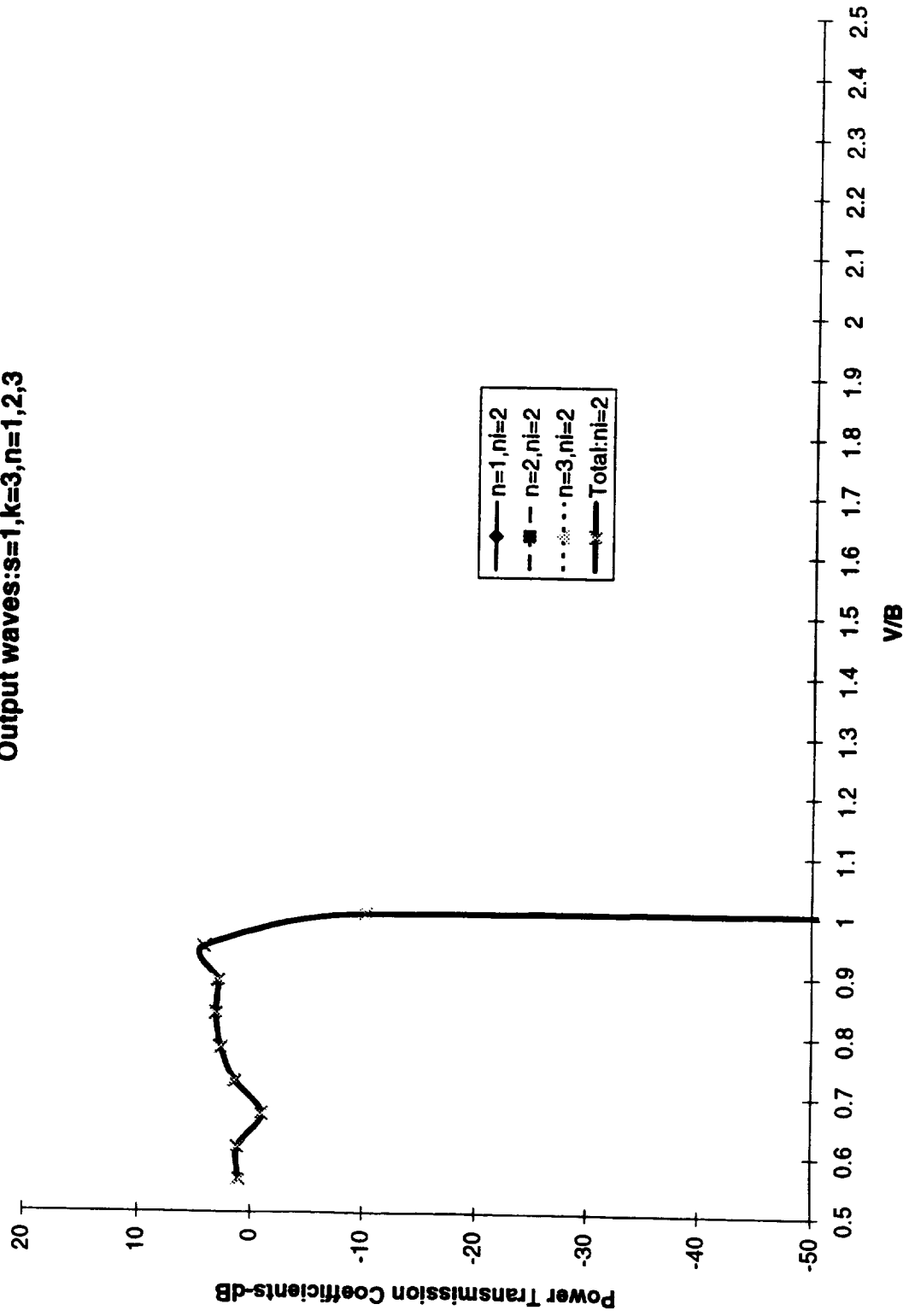
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

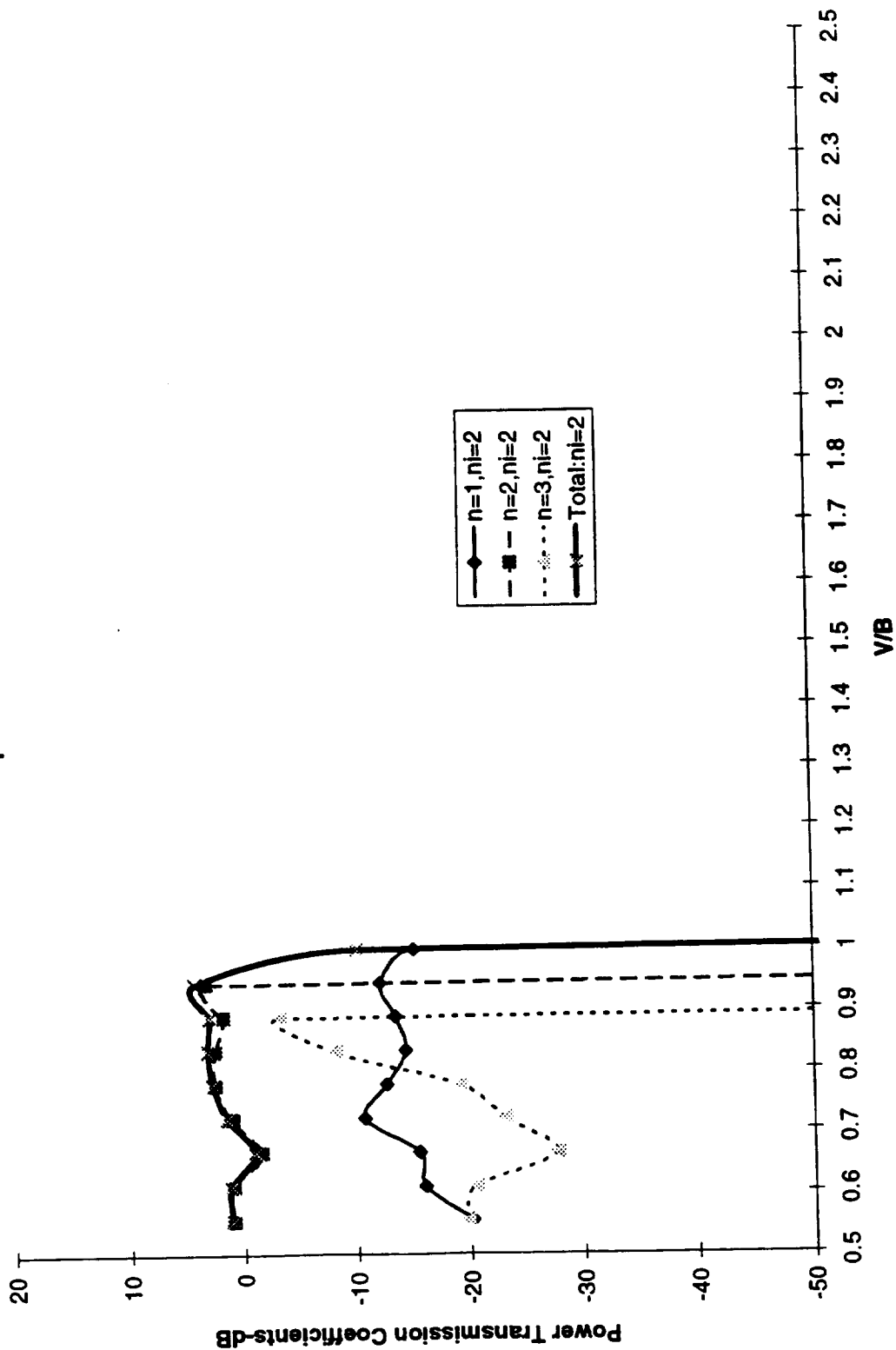
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=2, k_l=3, n_l=2$

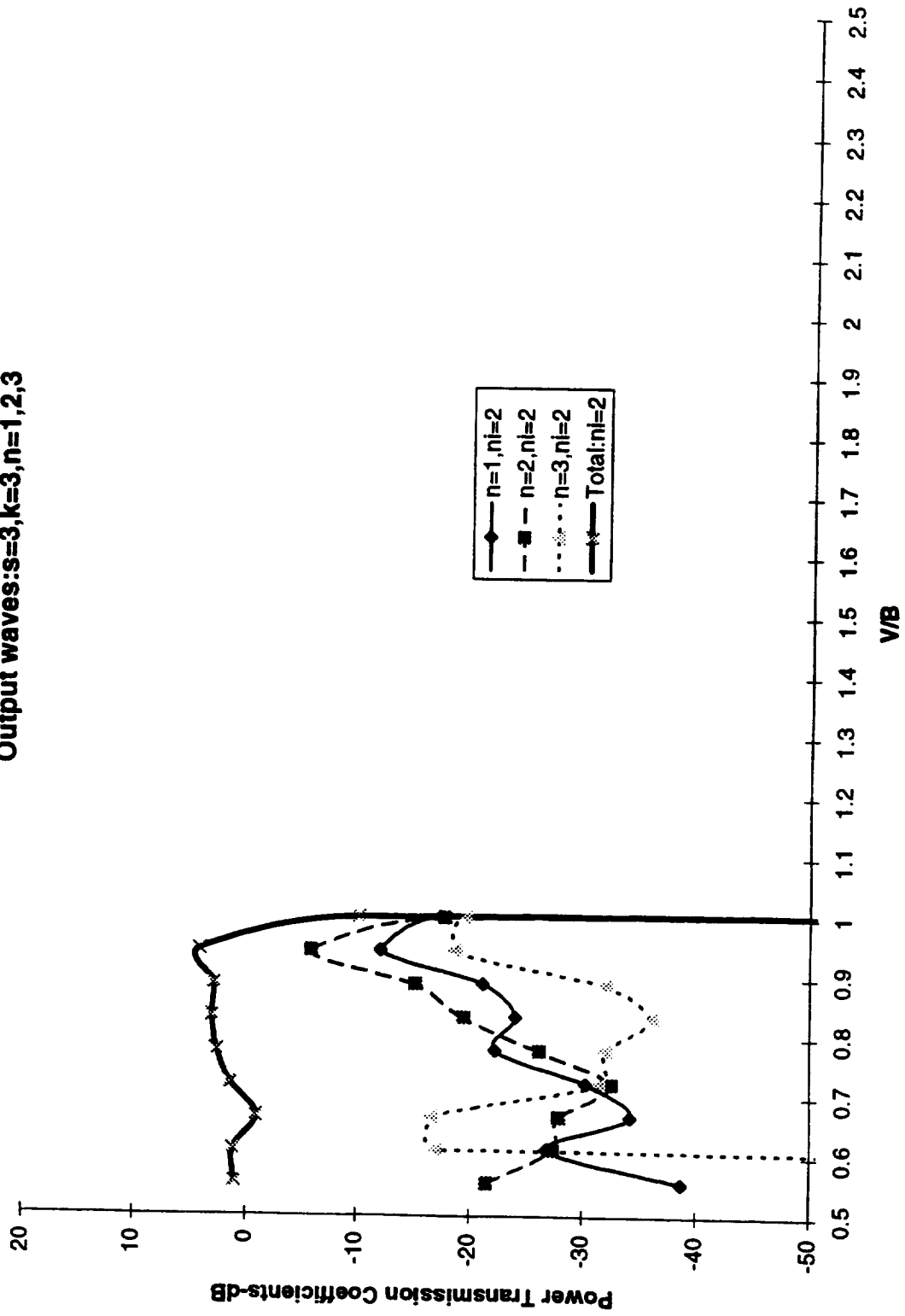
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

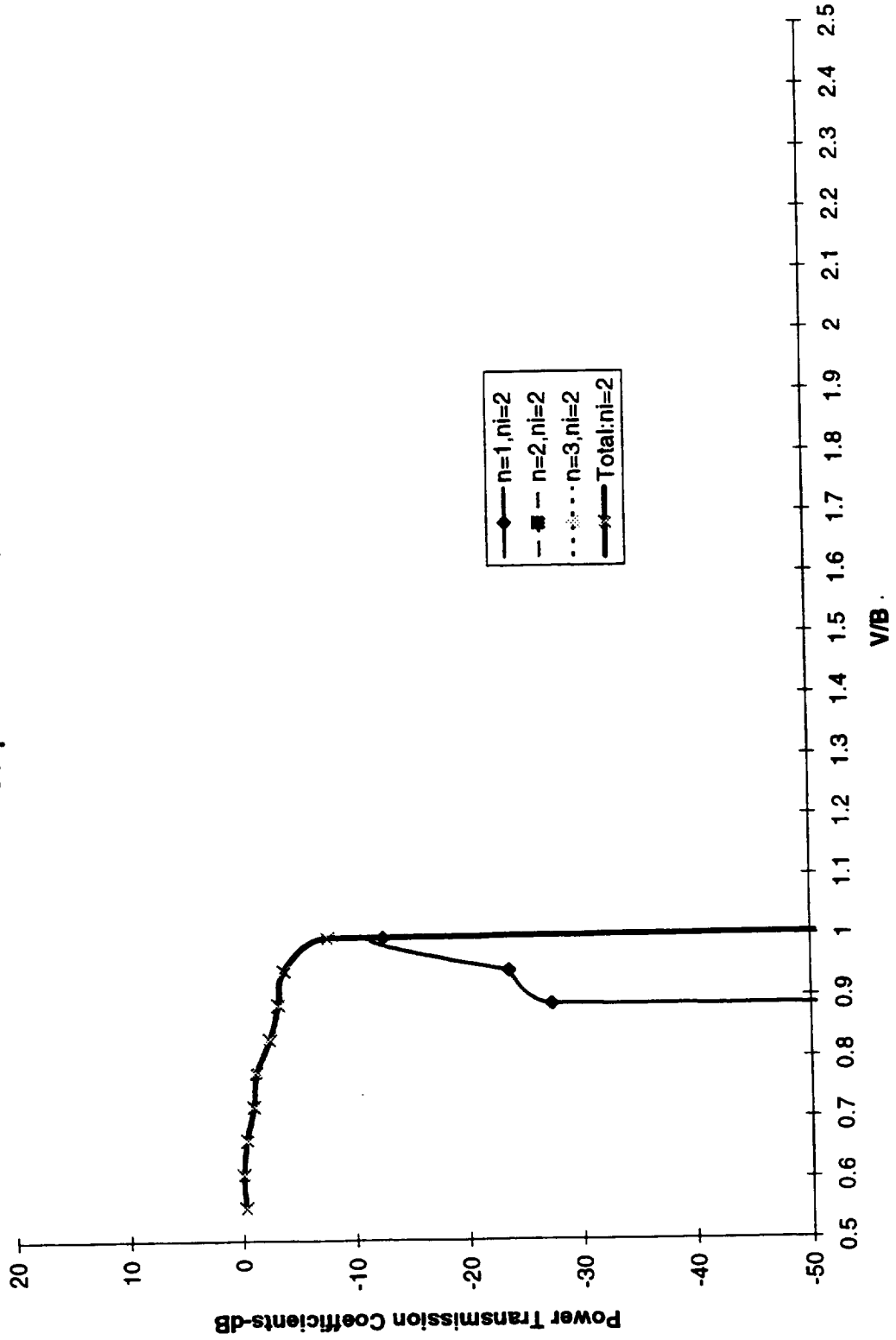
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

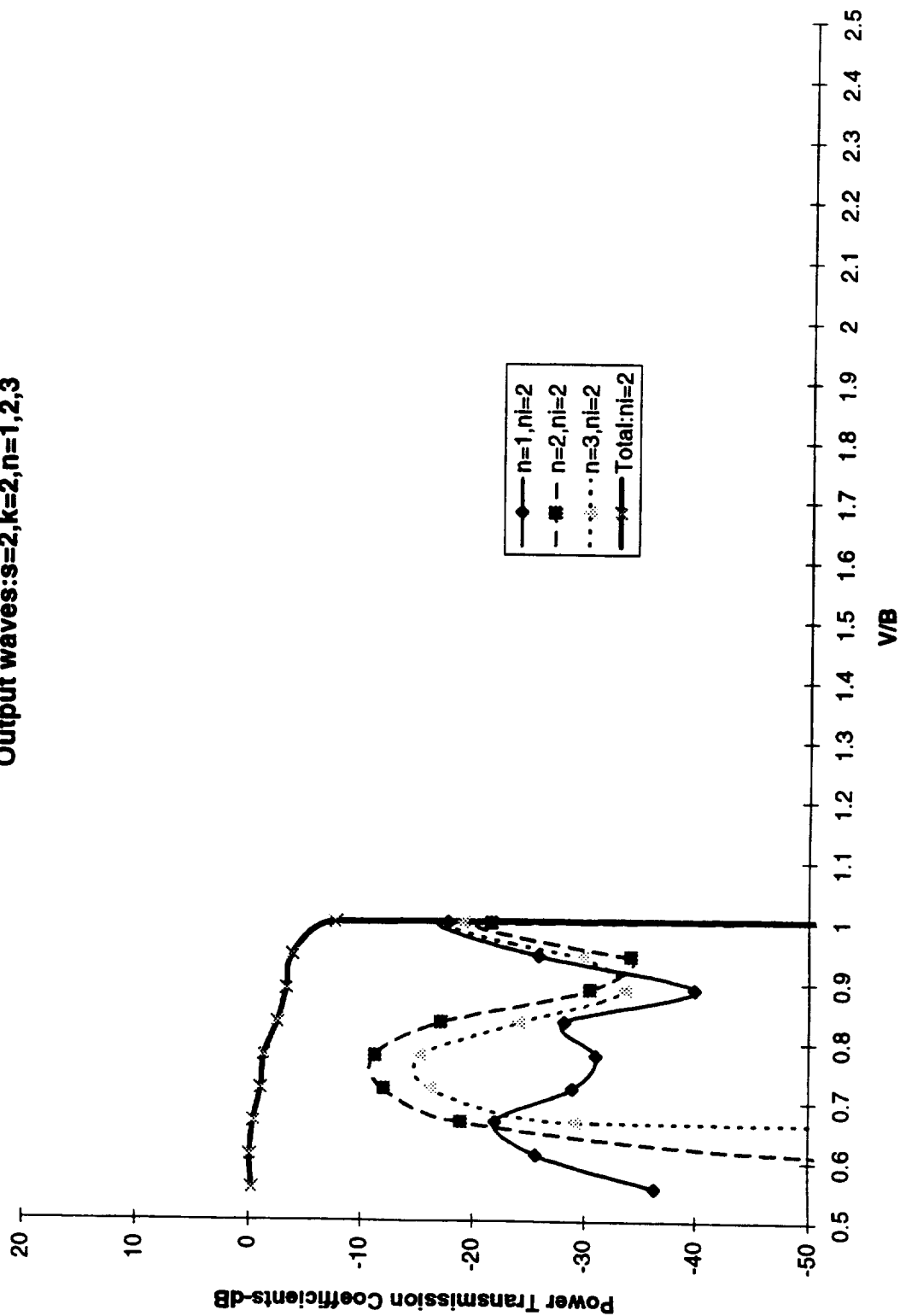
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

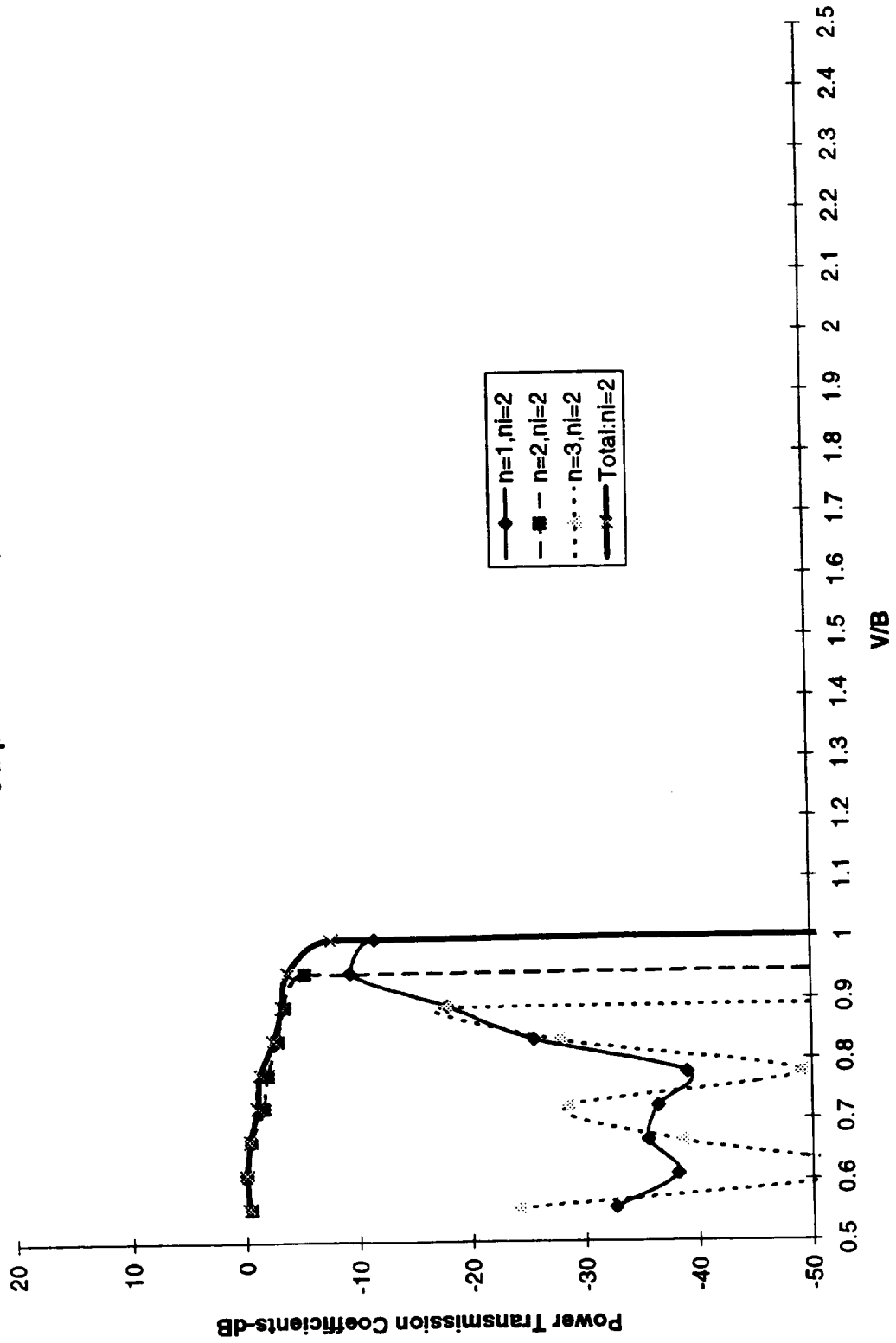
Output waves: $s=2, k=2, n=1, 2, 3$



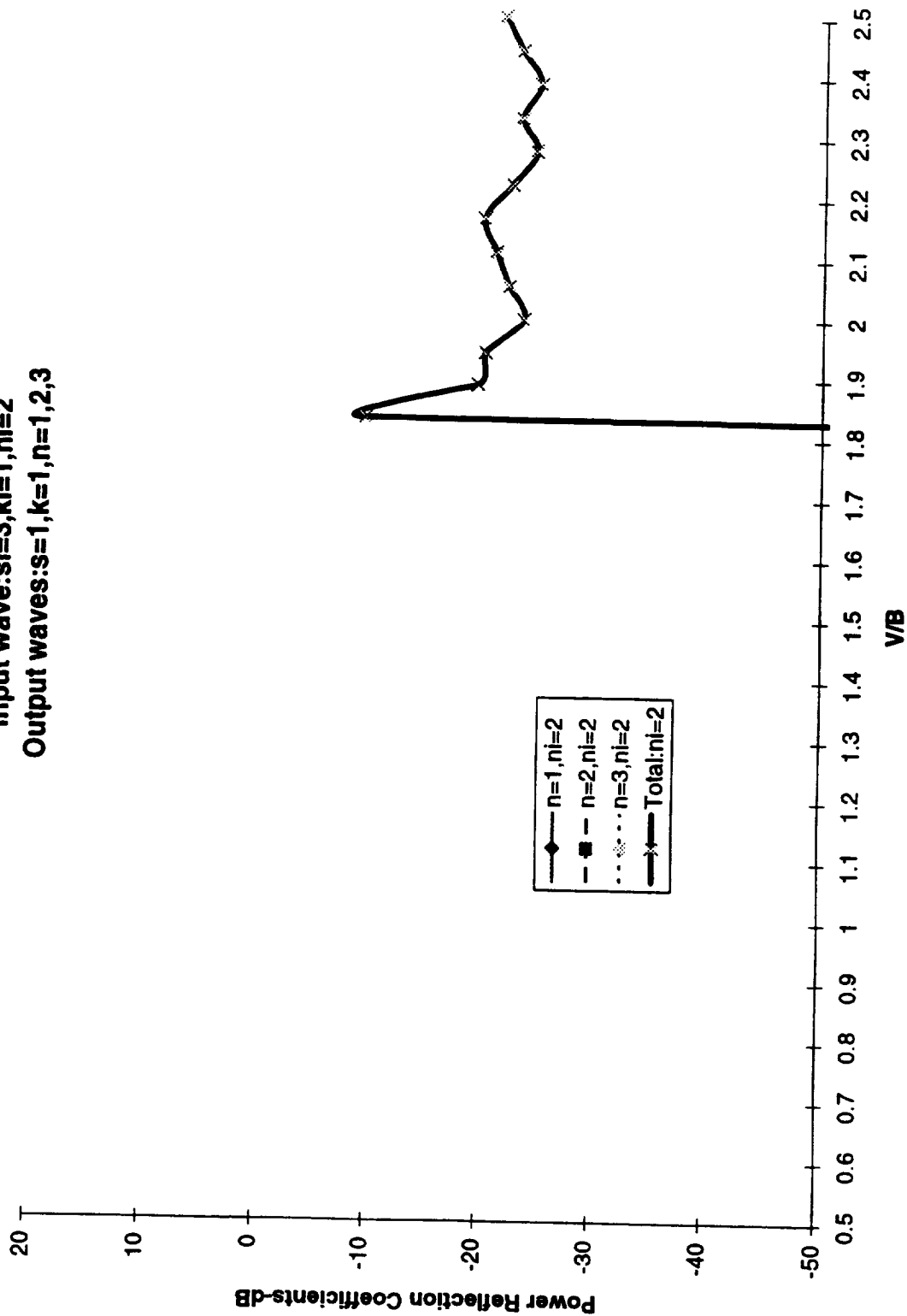
Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=2$

Output waves: $s=2, k=3, n=1, 2, 3$



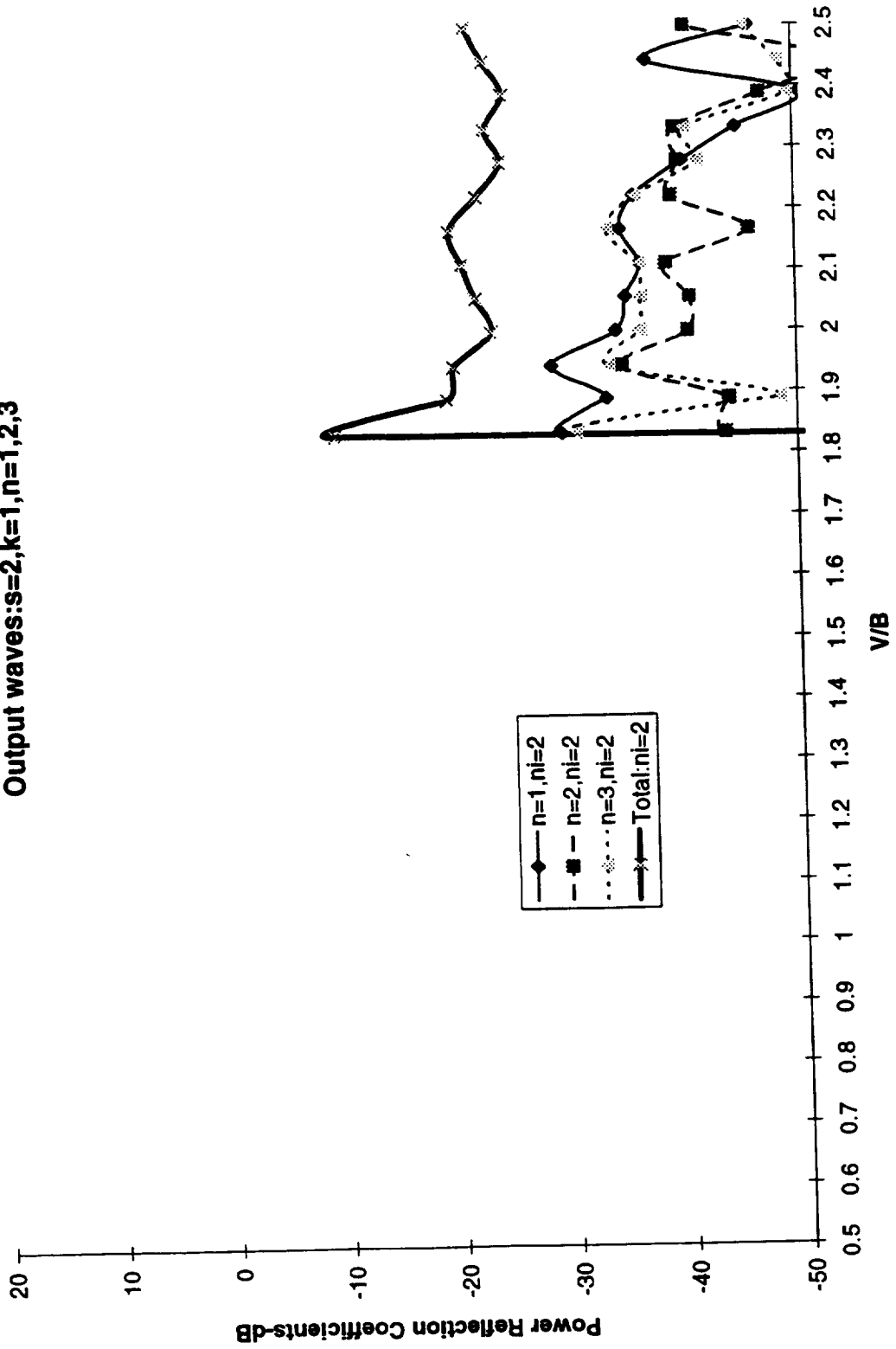
Rotor Reflection-Mid Speed Case
Input wave: $s_i=3, k_i=1, n_i=2$
Output waves: $s=1, k=1, n=1, 2, 3$



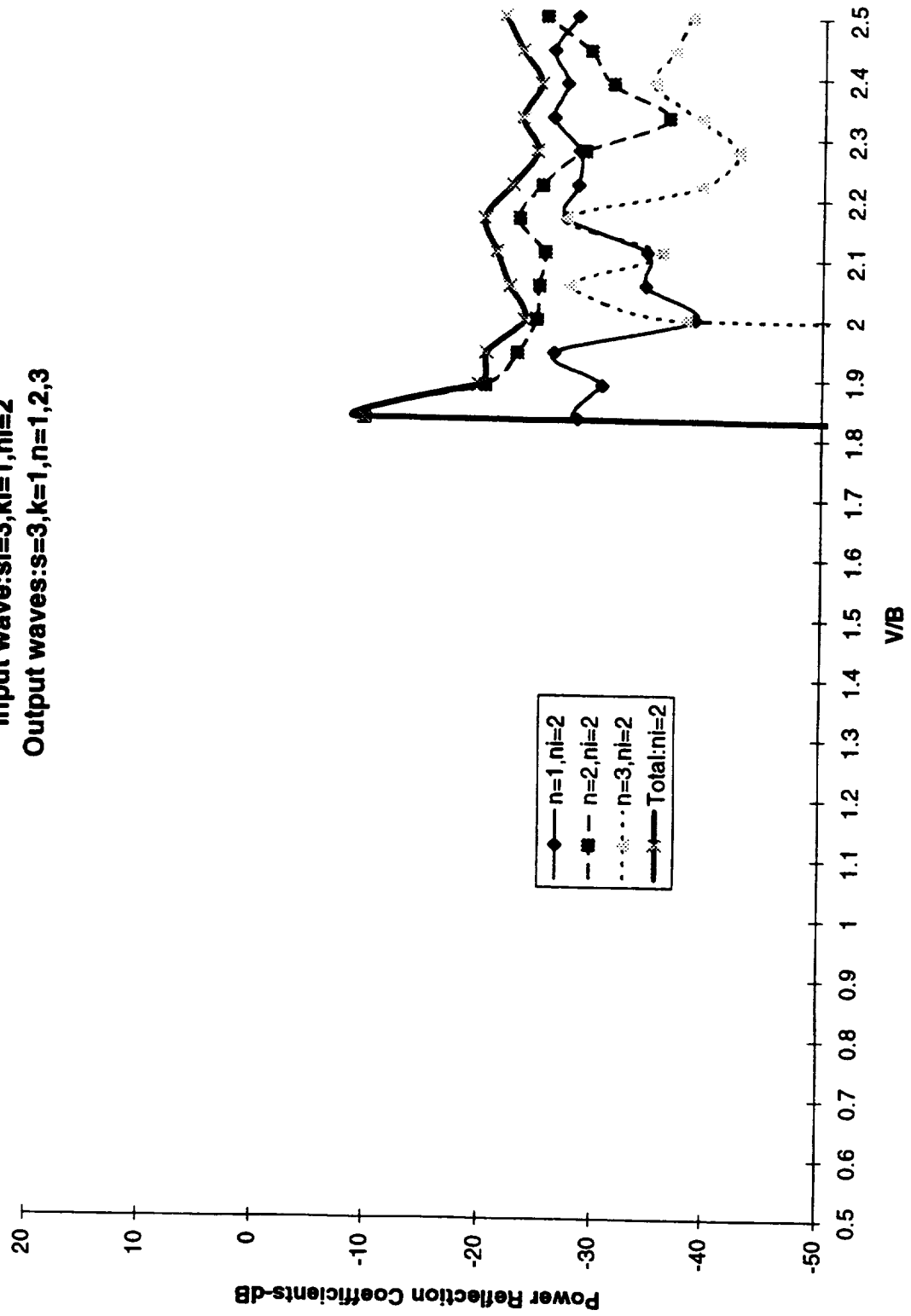
Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

Output waves: $s=2, k=1, n=1, 2, 3$



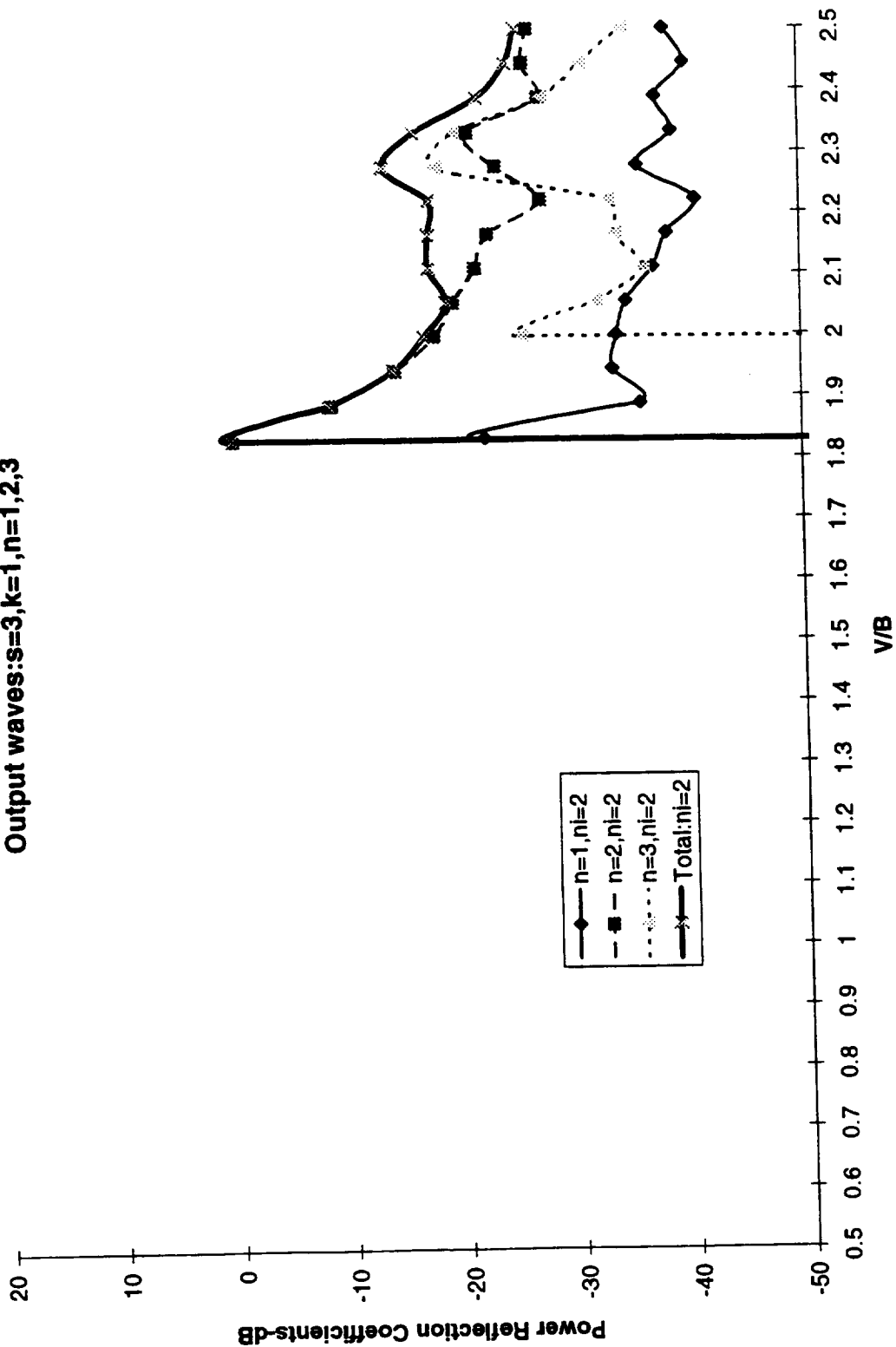
Rotor Reflection-Mid Speed Case
Input wave: $s_i=3, k_i=1, n_i=2$
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

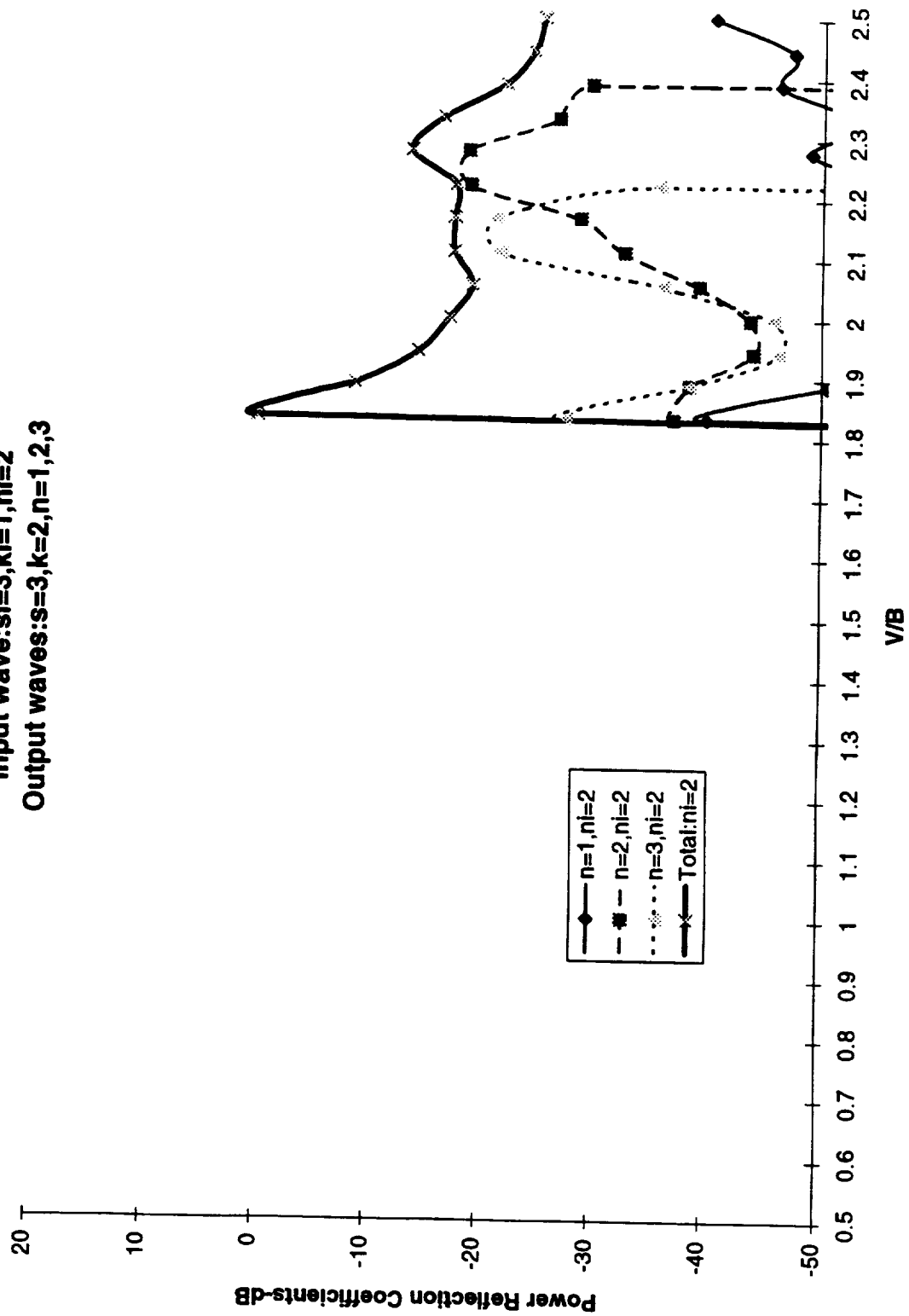
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

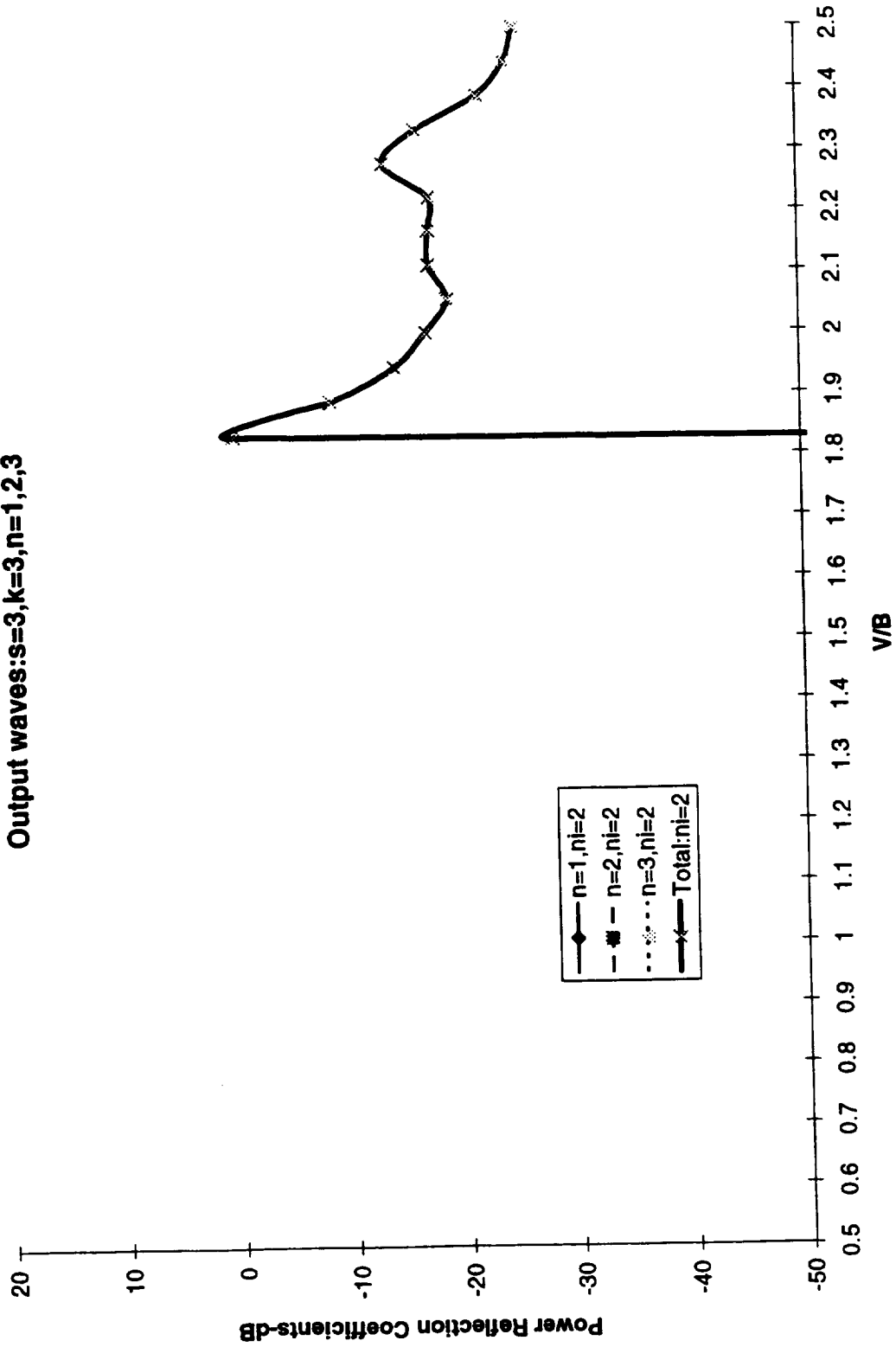
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

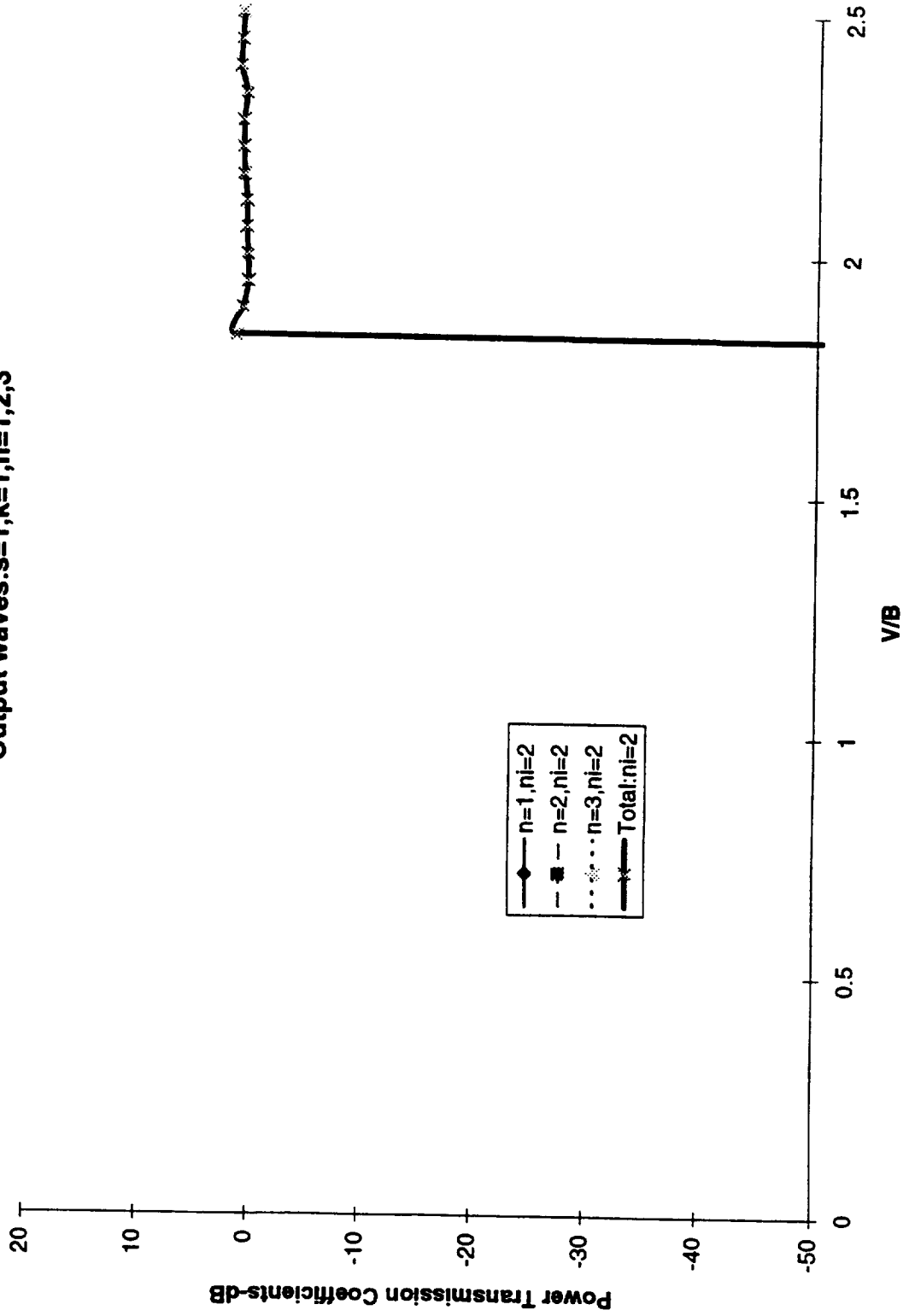
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

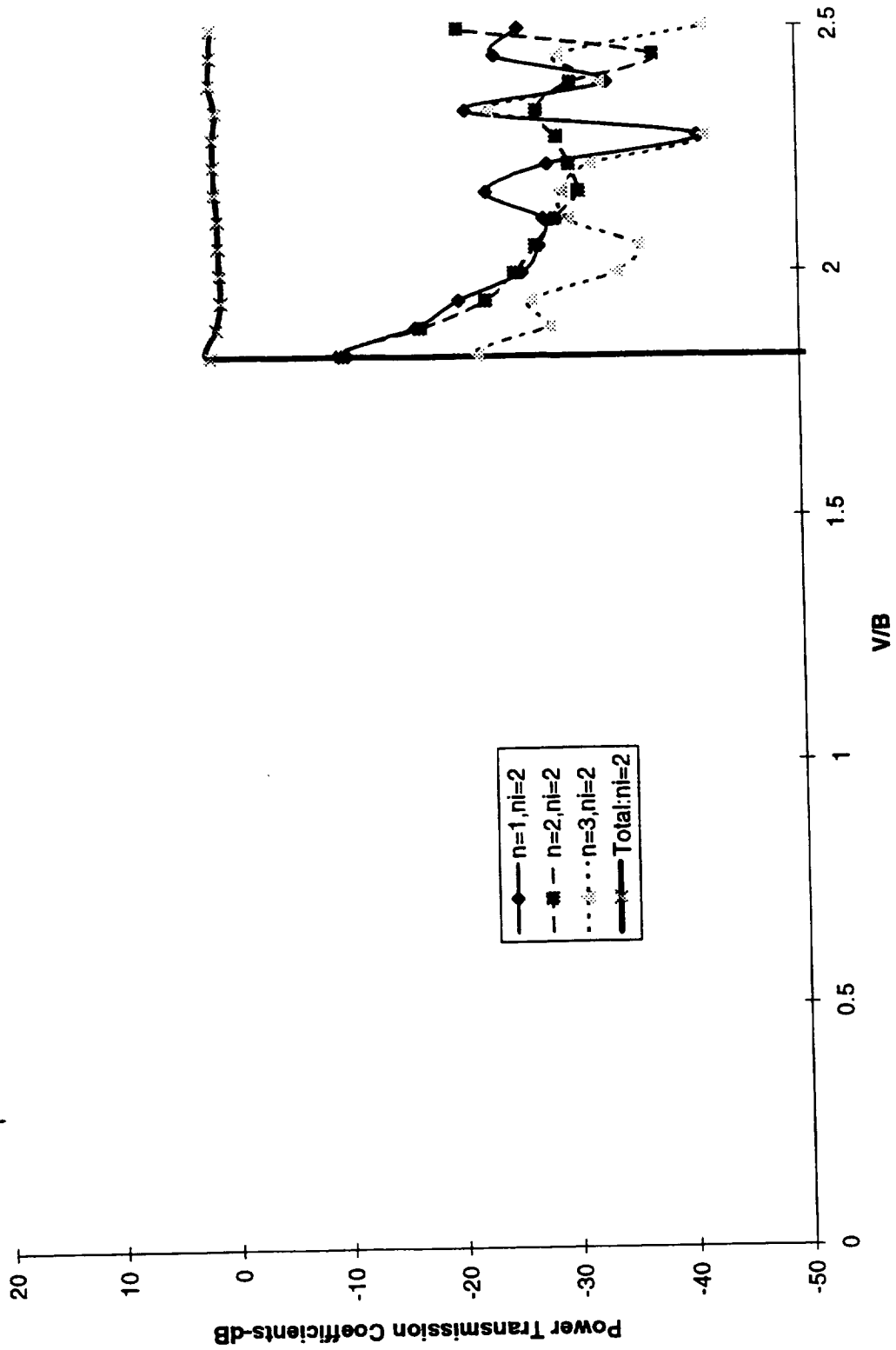
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

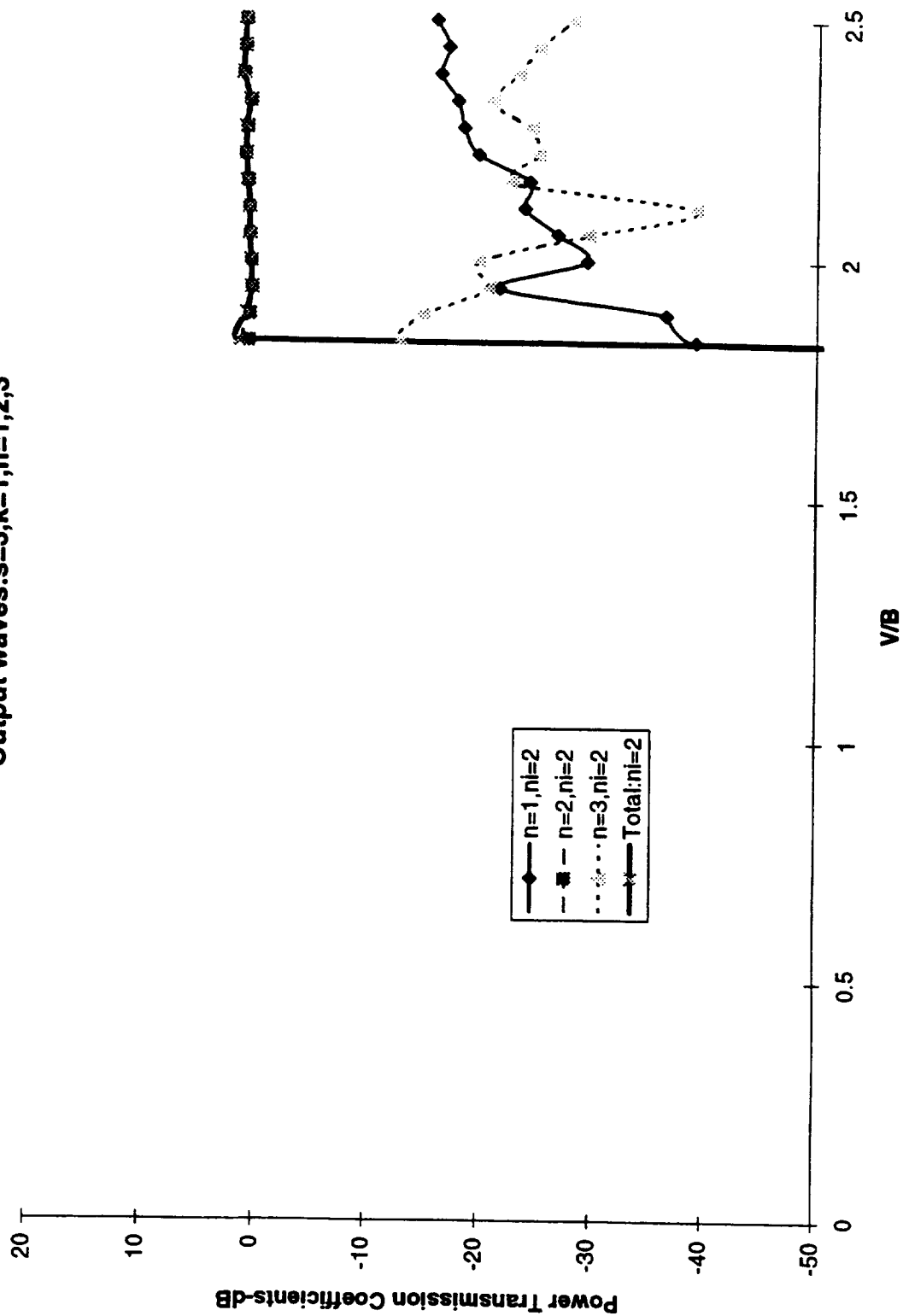
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=3, k_l=1, n_l=2$

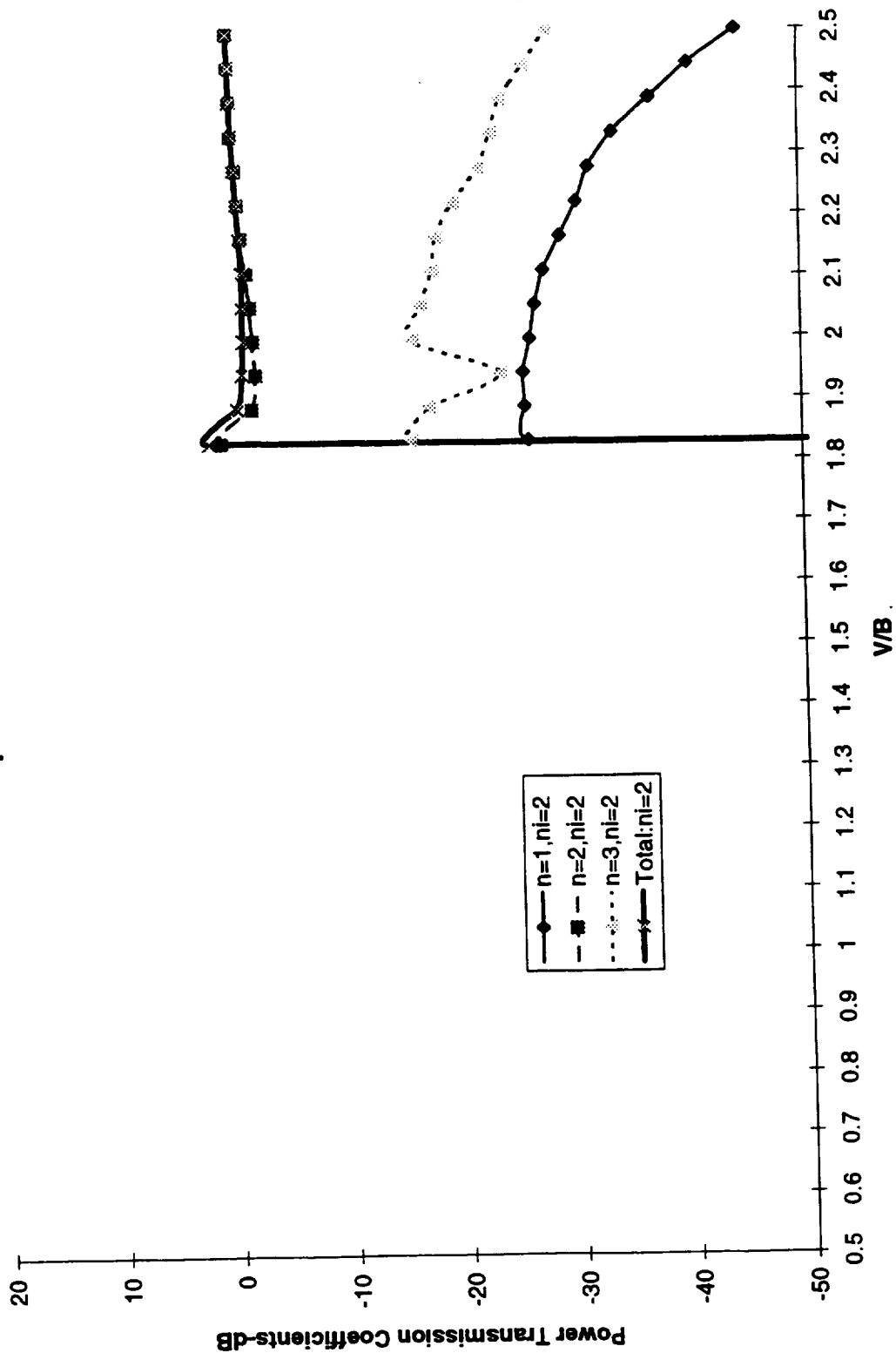
Output waves: $s=3, k=1, n=1, 2, 3$



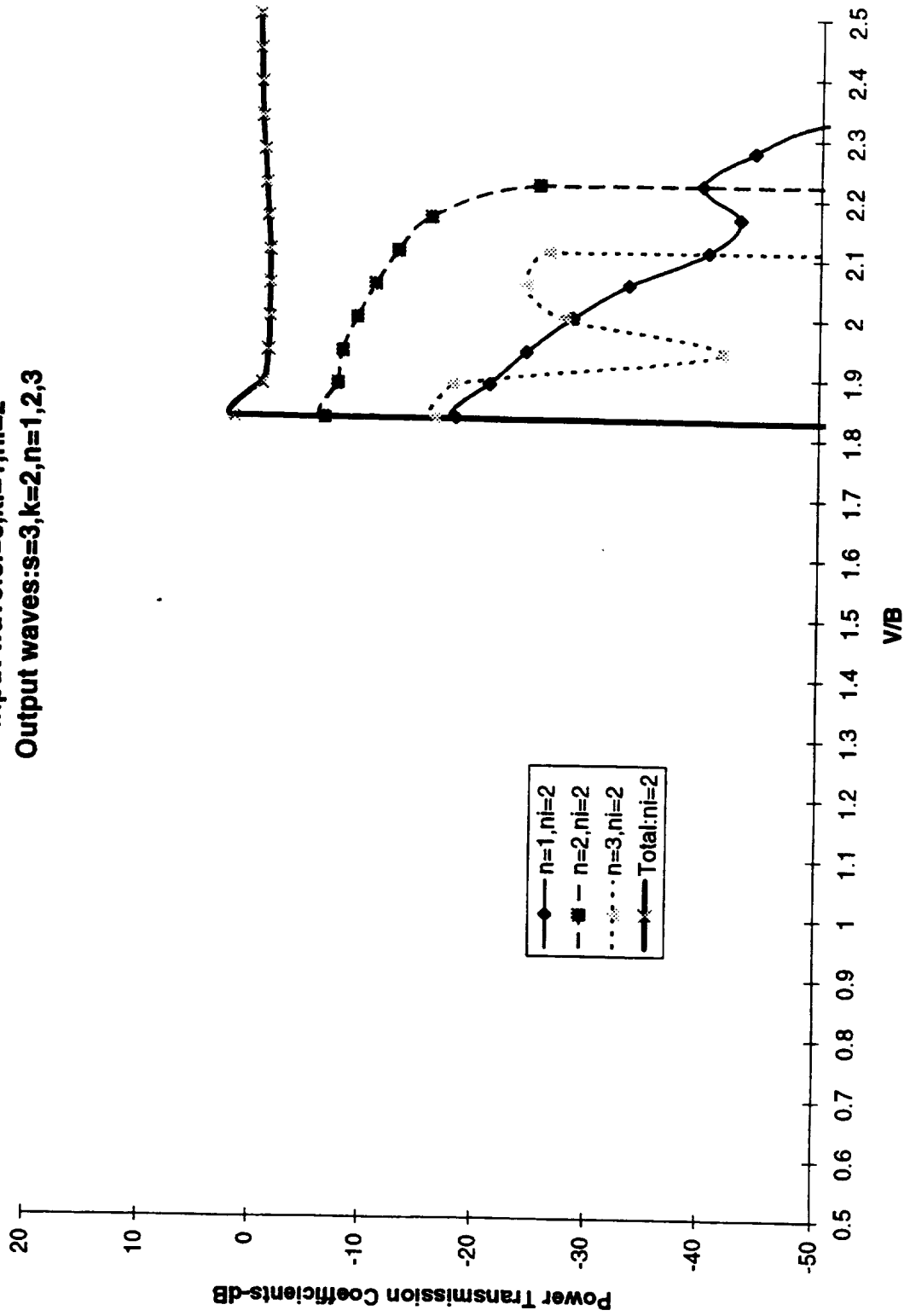
Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

Output waves: $s=3, k=1, n=1, 2, 3$



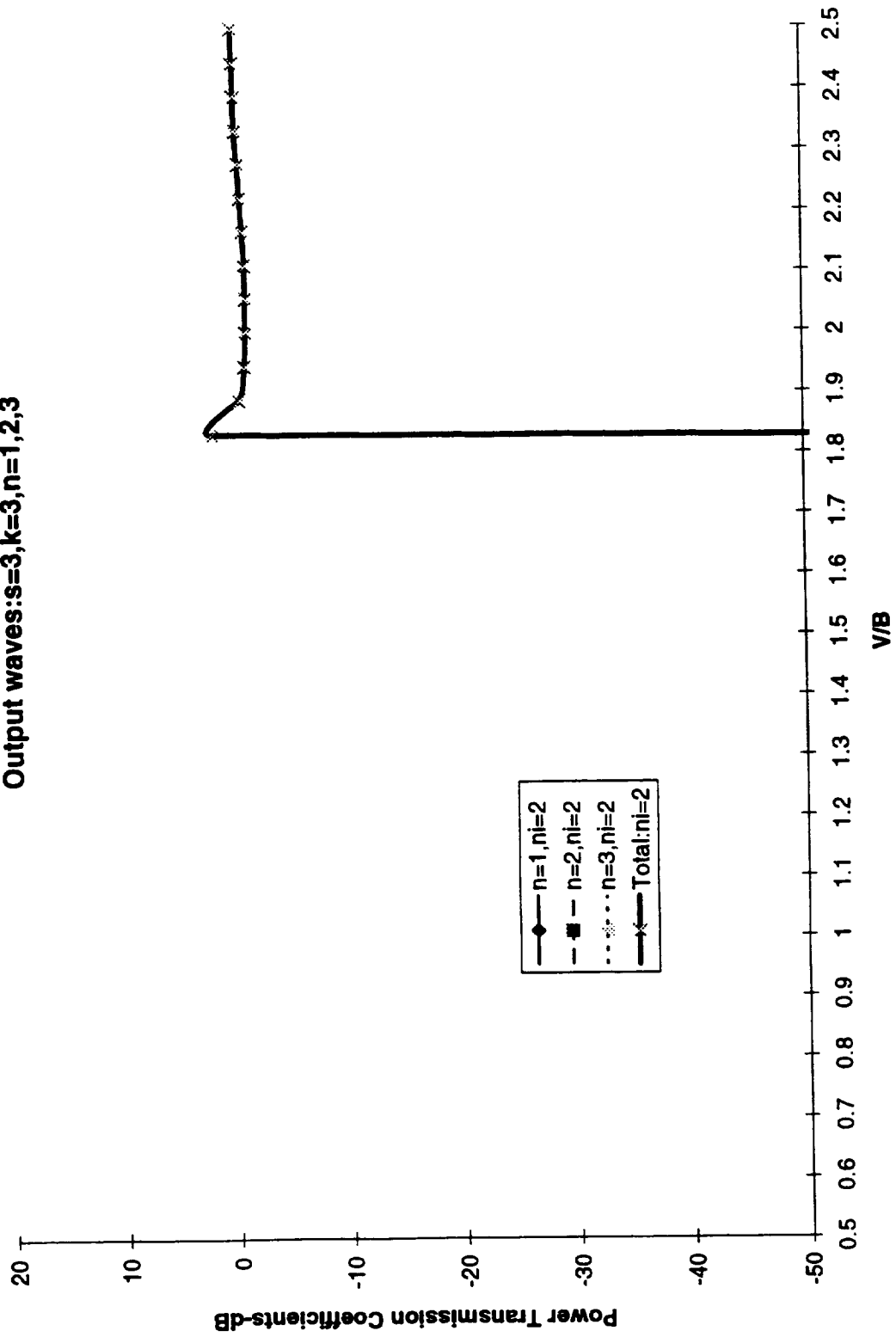
Stator Transmission-Mid Speed Case
Input wave: $s_i=3, k_i=1, n_i=2$
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=2$

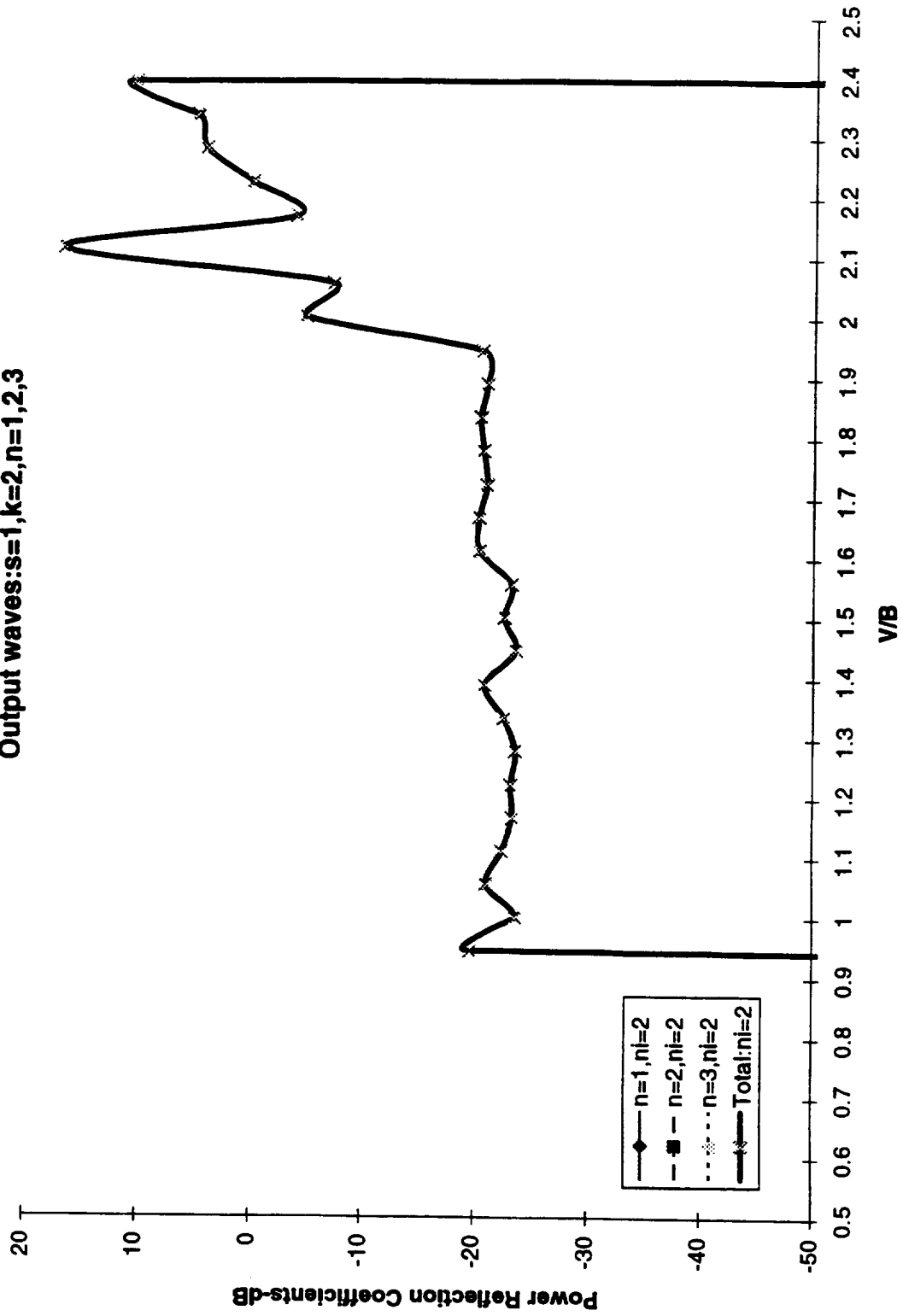
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

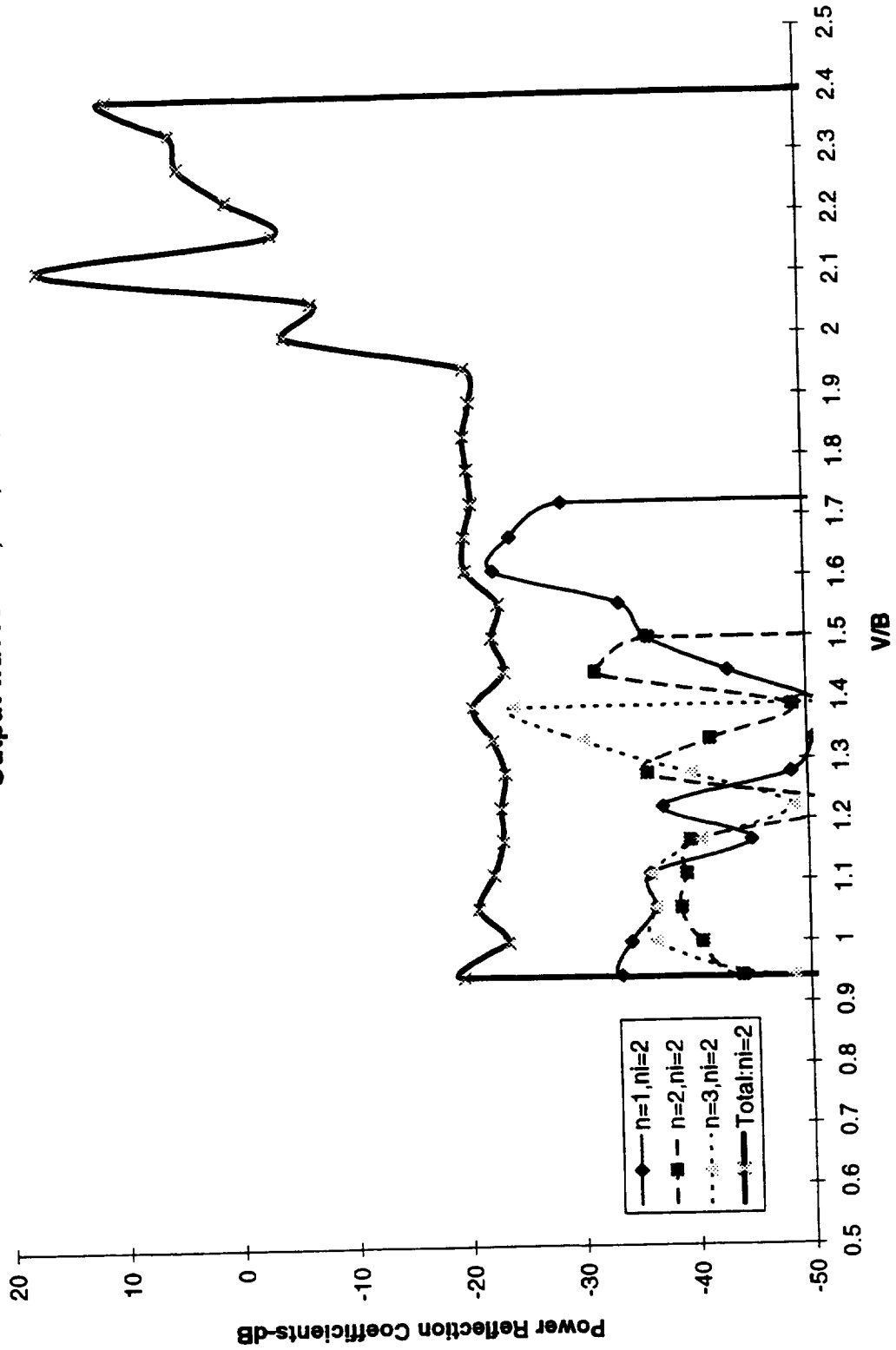
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

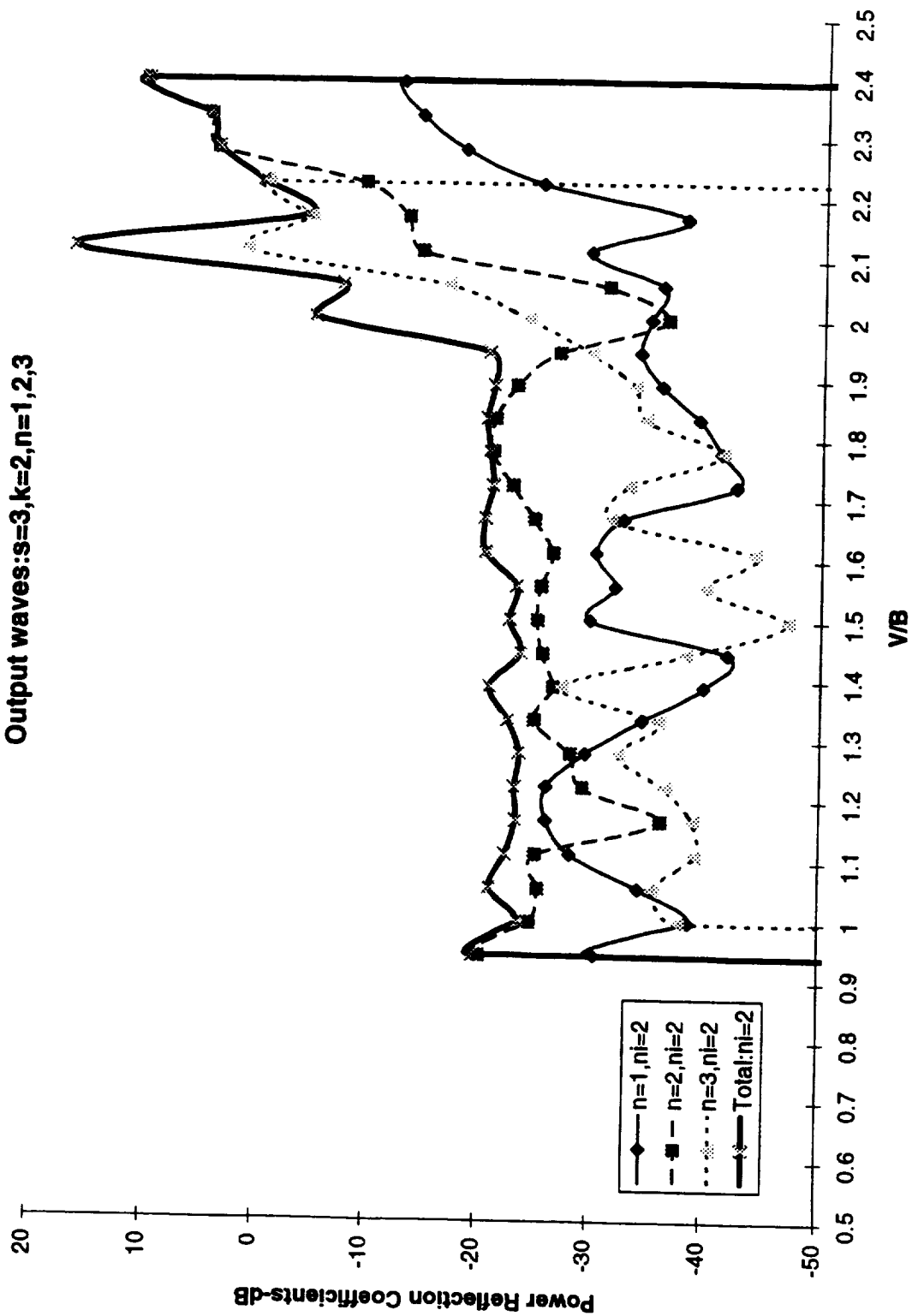
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

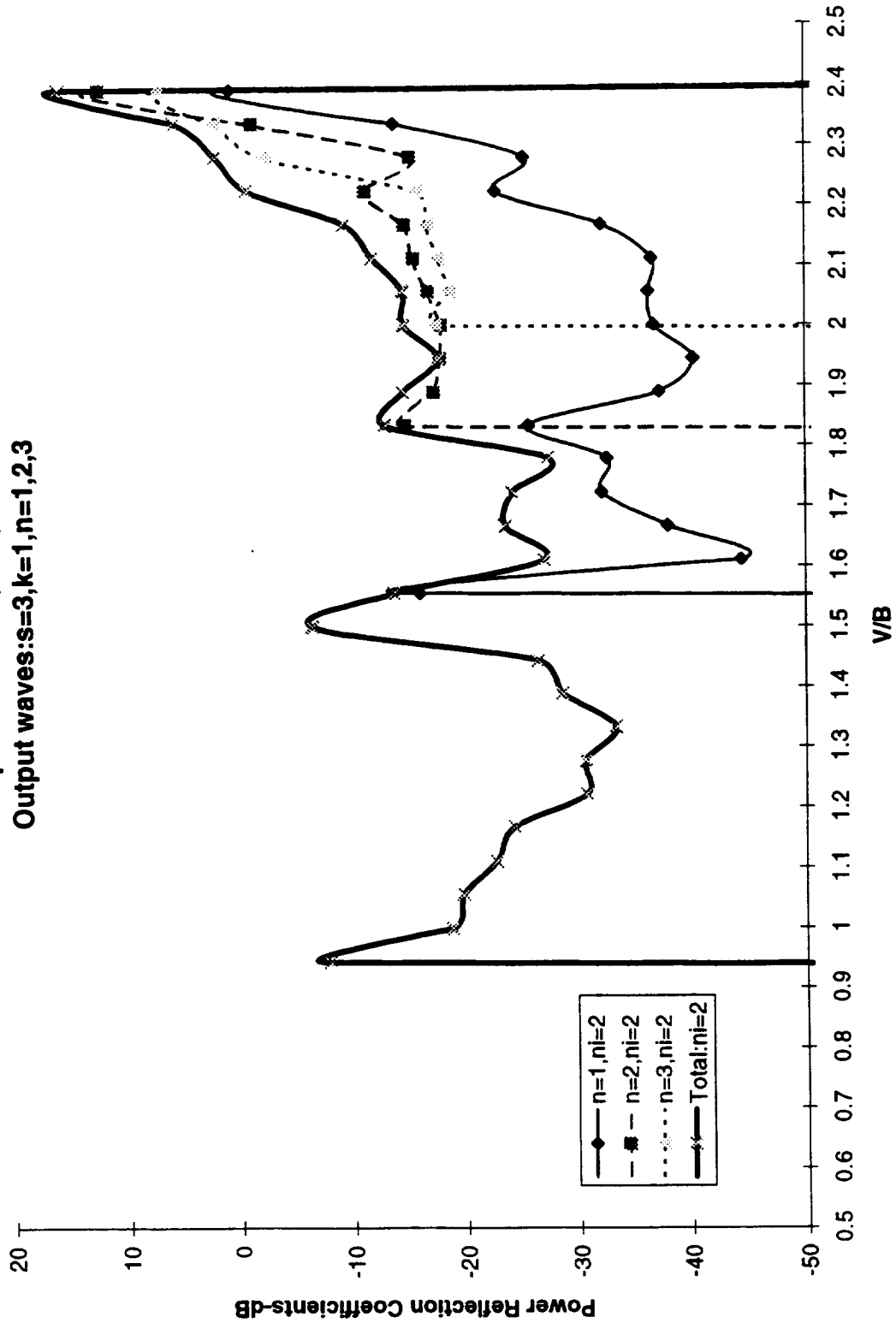
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

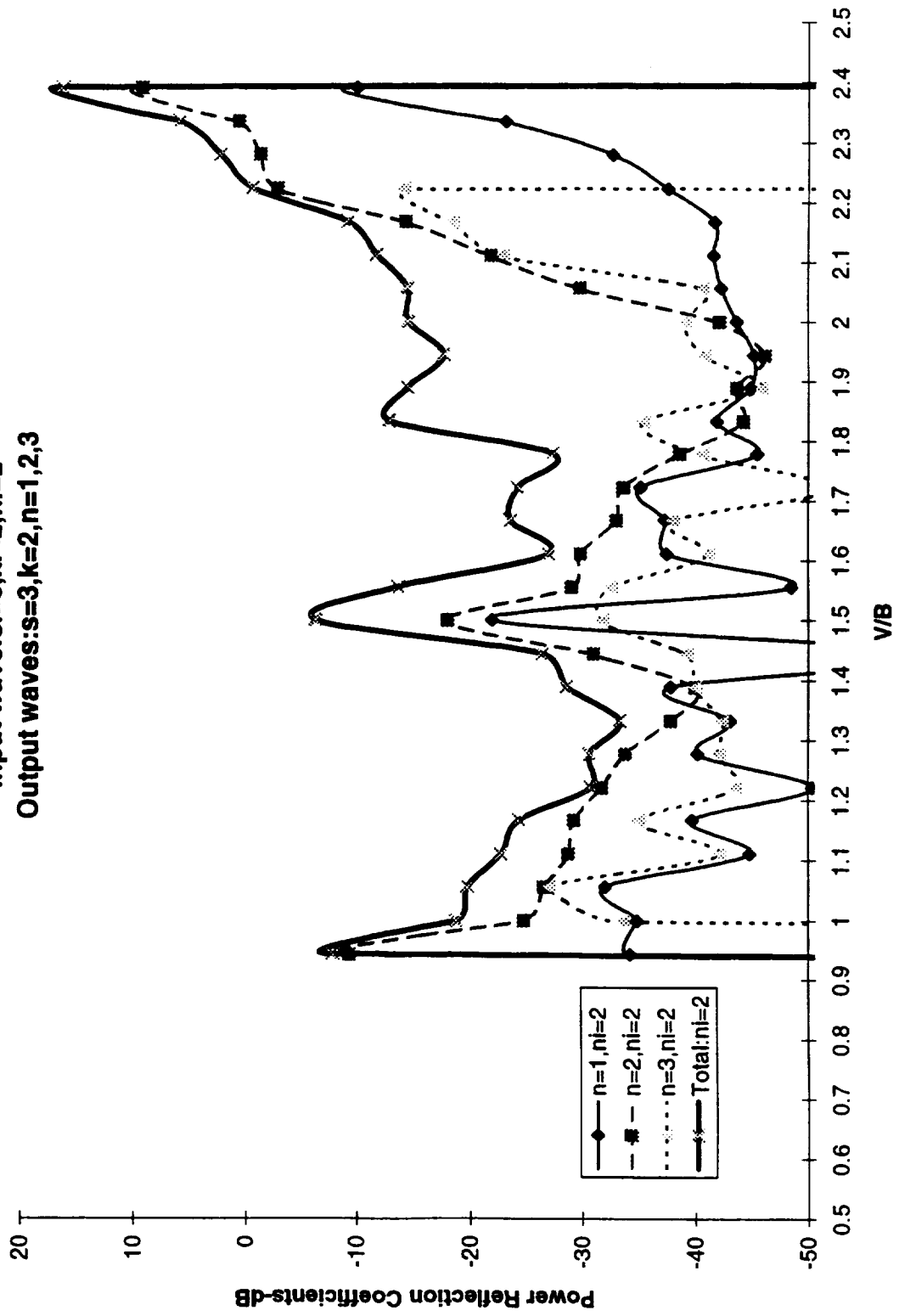
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

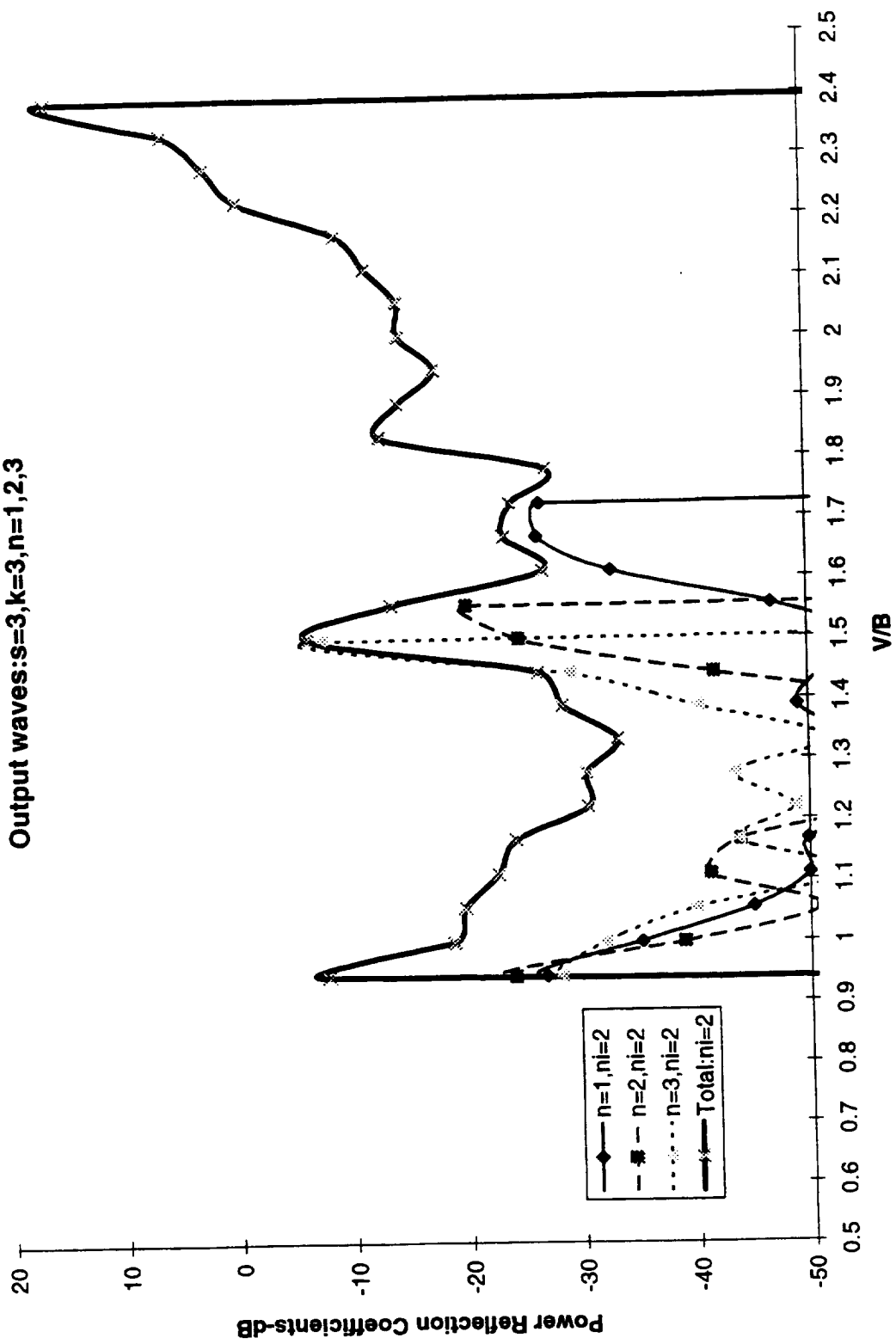
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

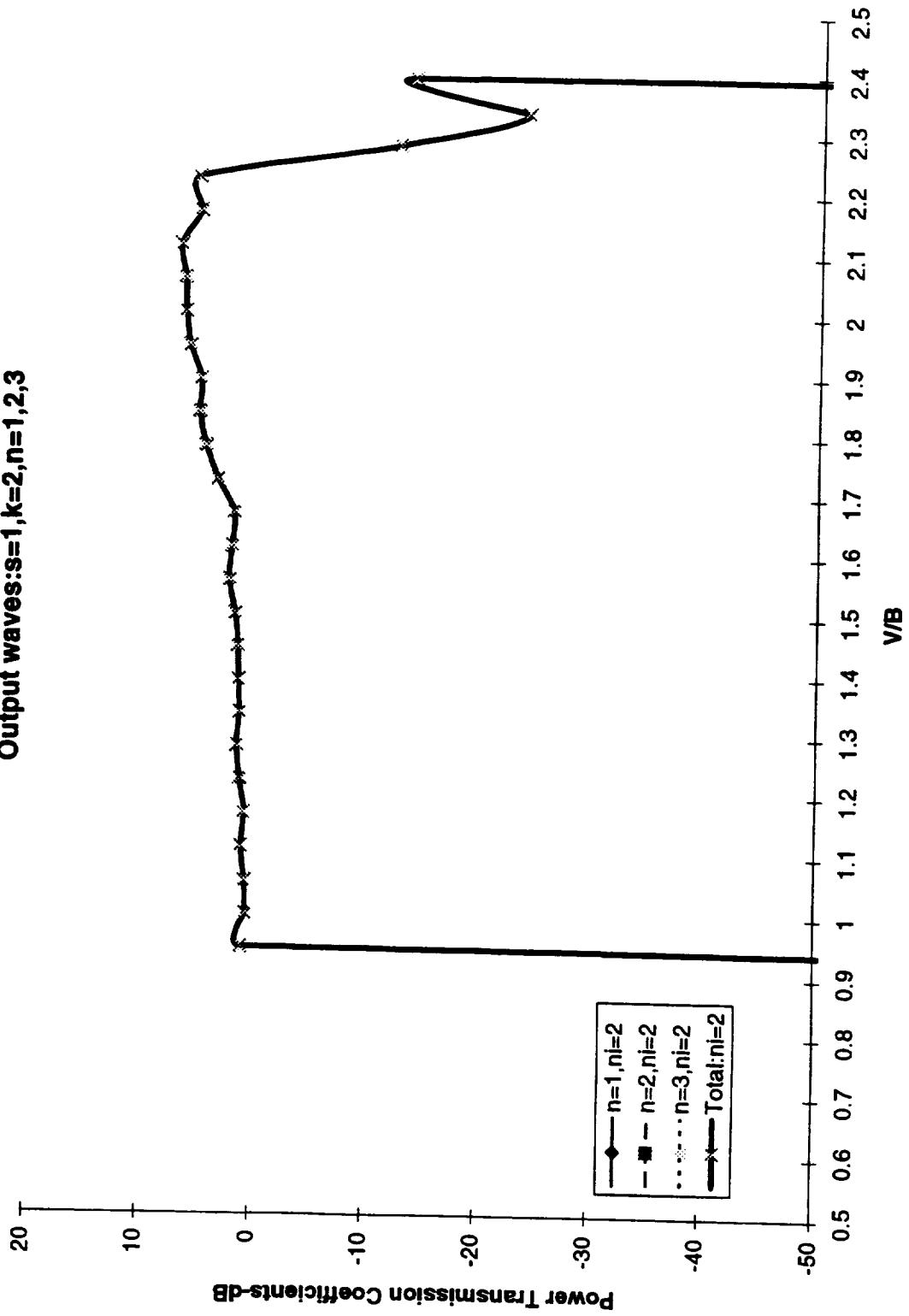
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=3, k_l=2, n_l=2$

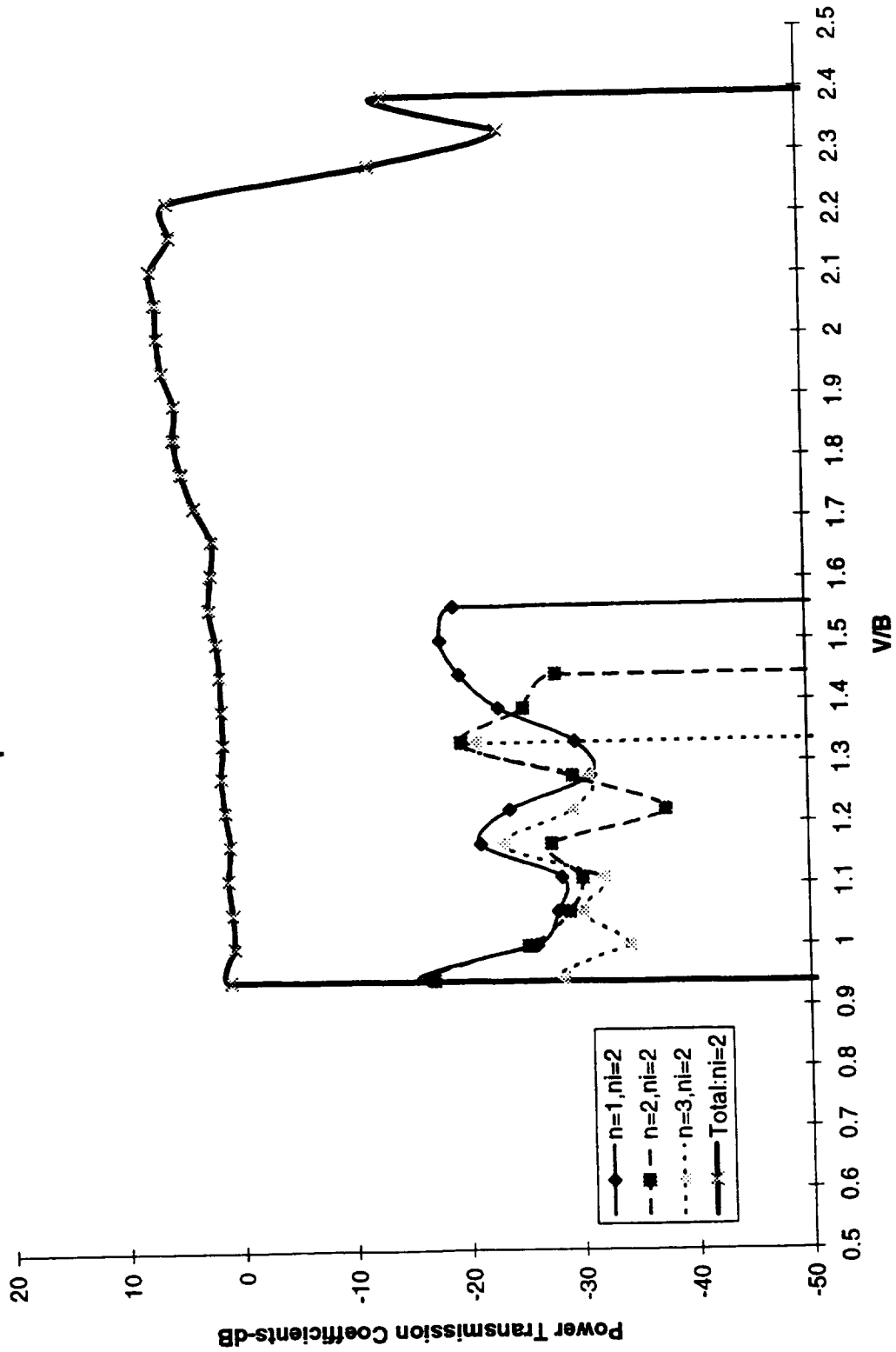
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=3, k_l=2, n_l=2$

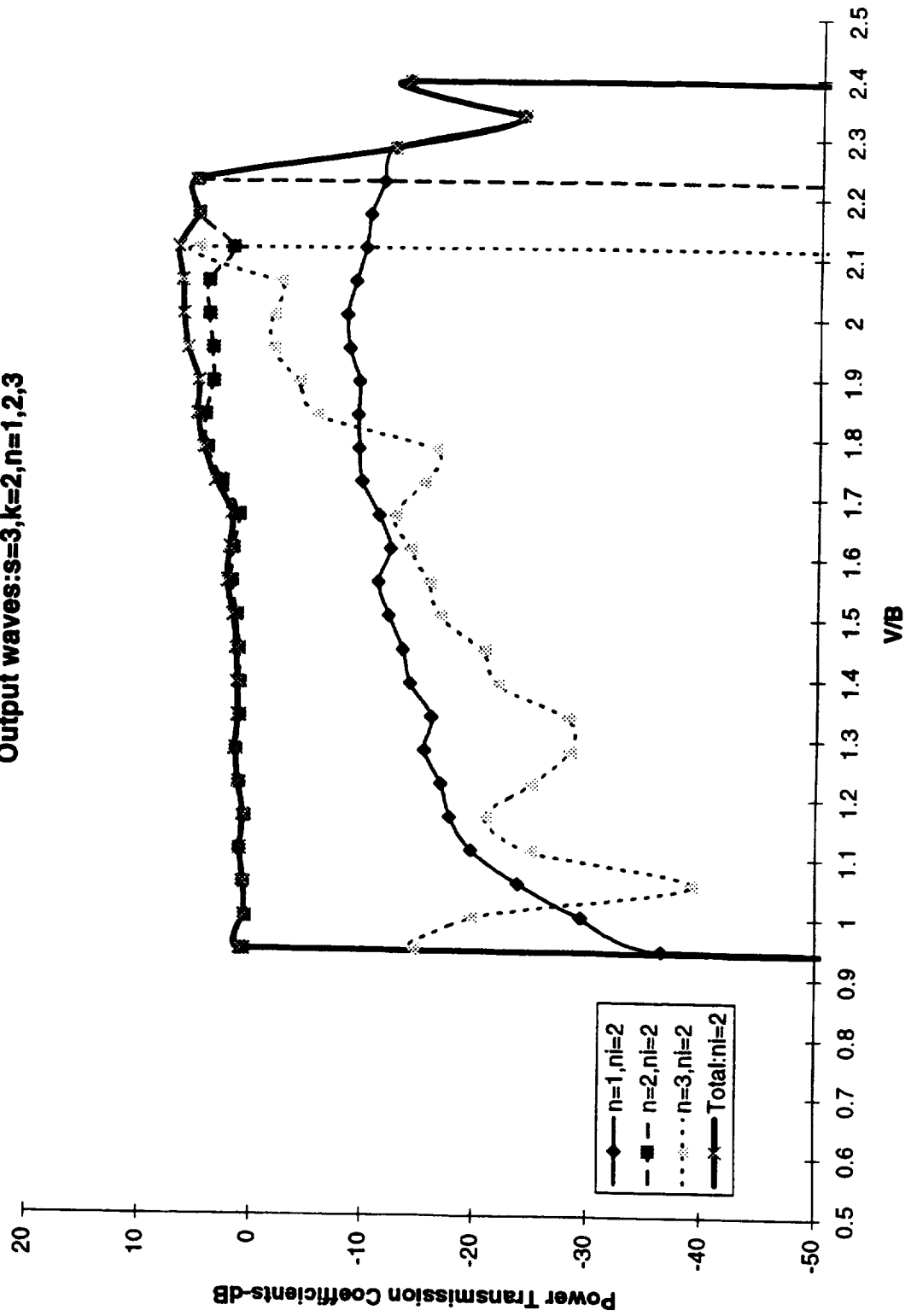
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

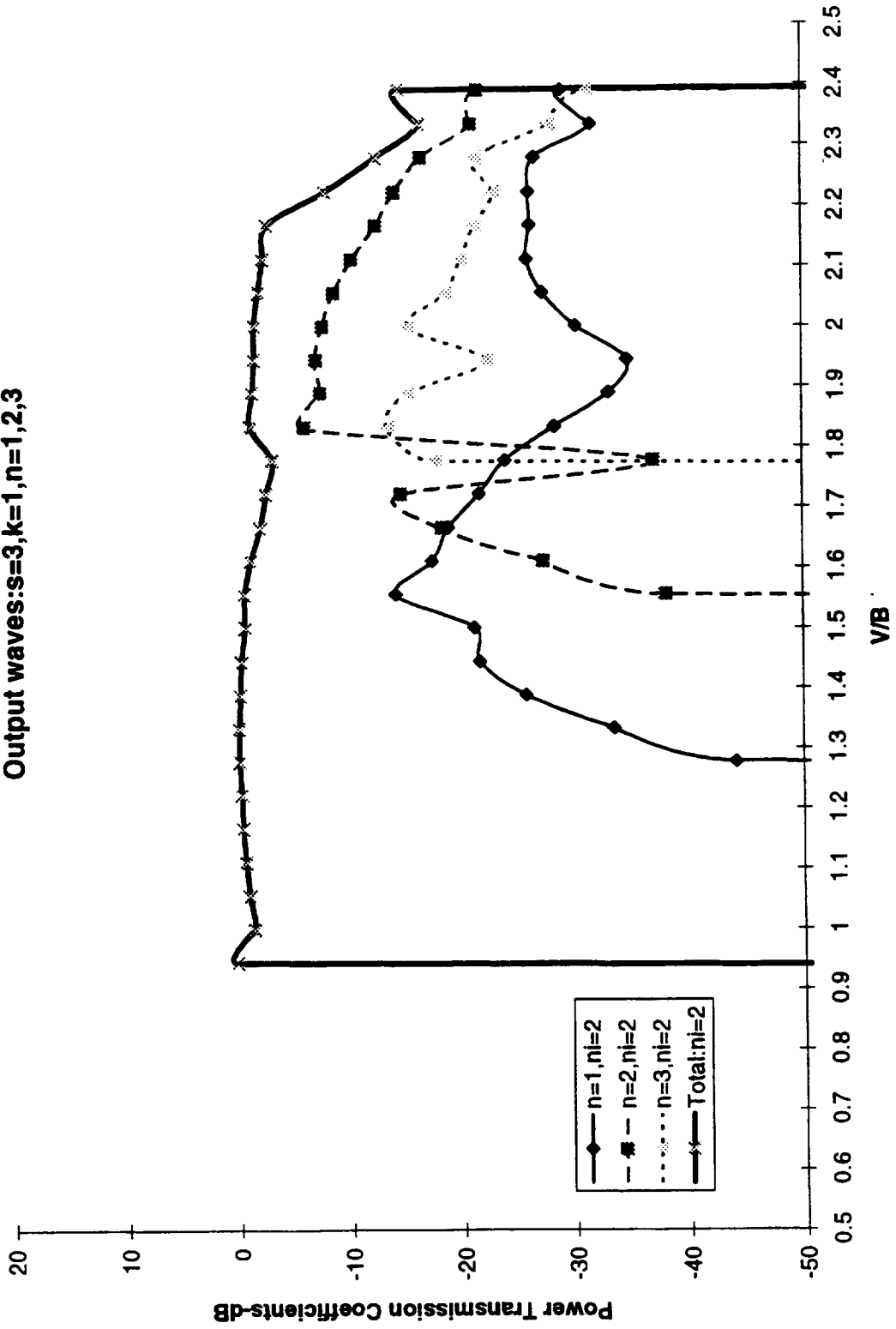
Output waves: $s=3, k=2, n=1, 2, 3$



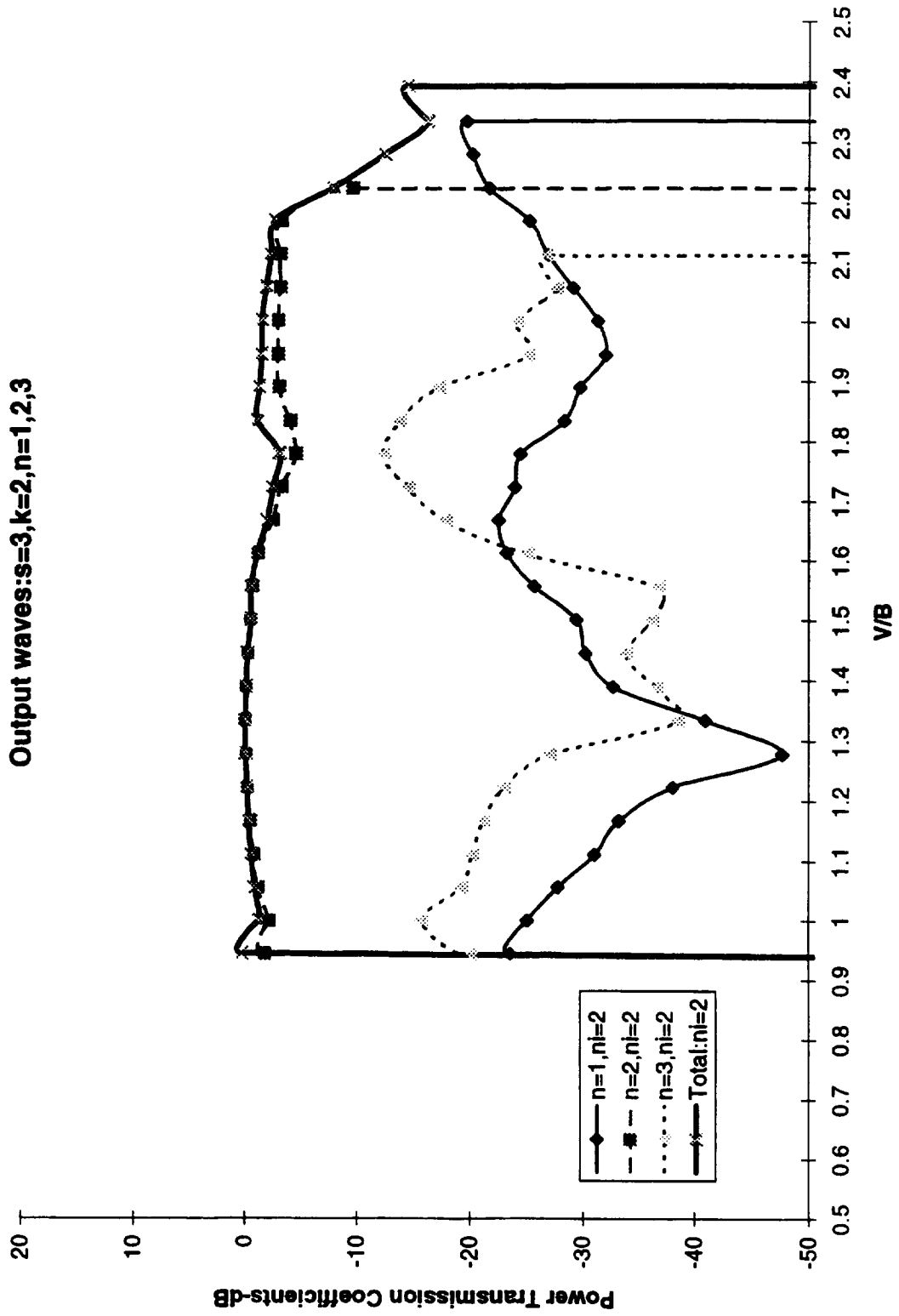
Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=2$

Output waves: $s=3, k=1, n=1, 2, 3$



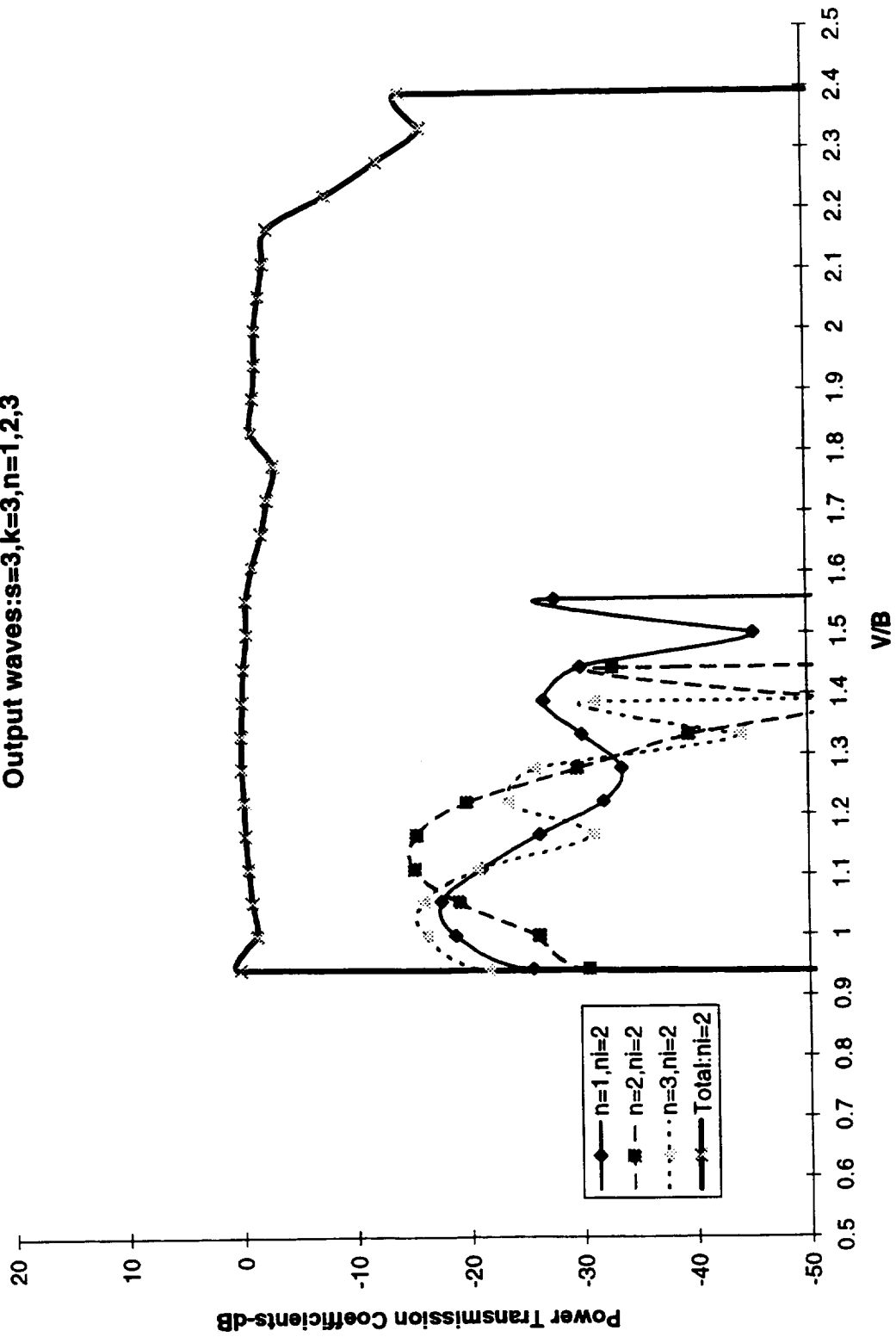
Stator Transmission-Mld Speed Case
Input wave: $s_i=3, k_i=2, n_i=2$
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $sl=3, ki=2, ni=2$

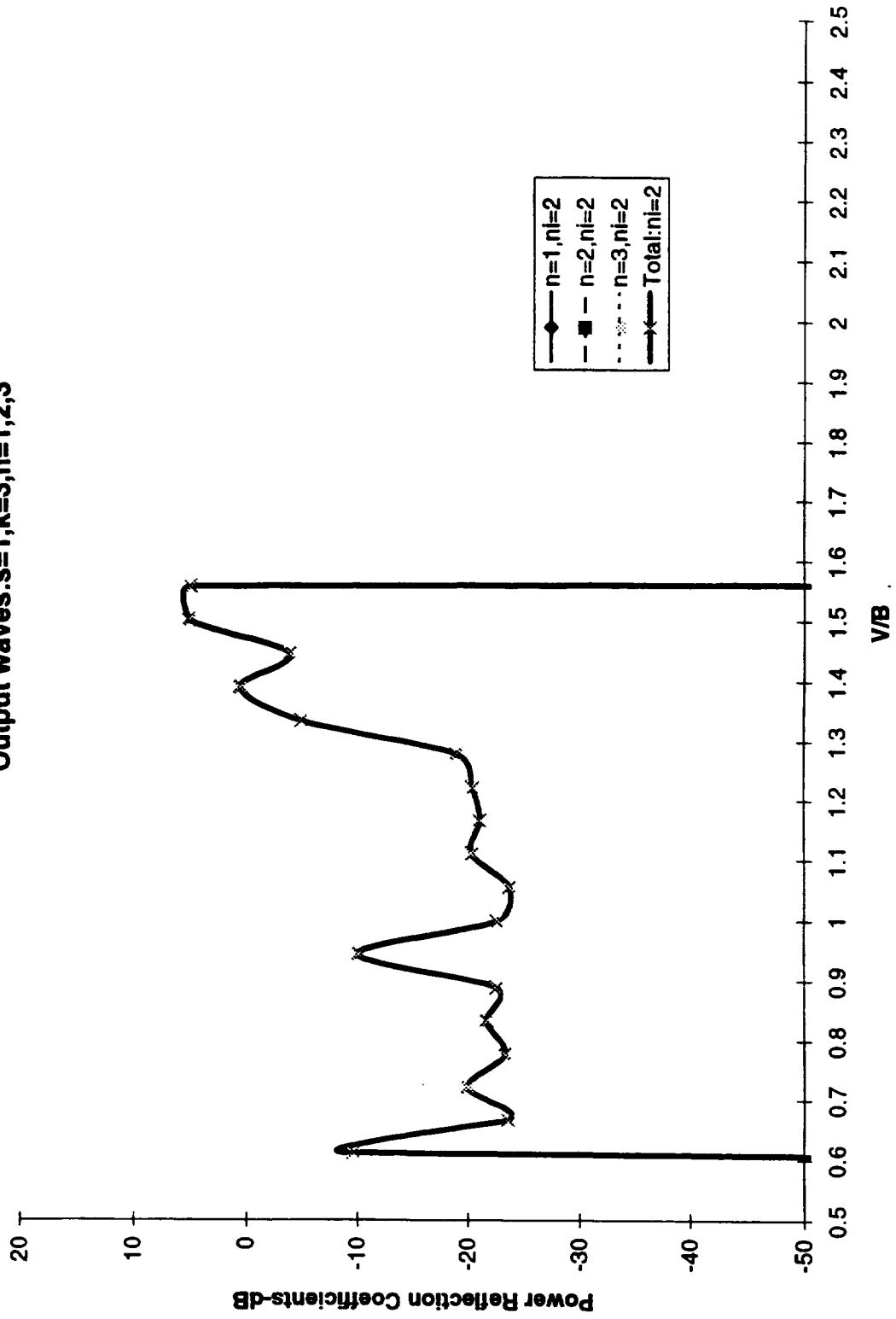
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

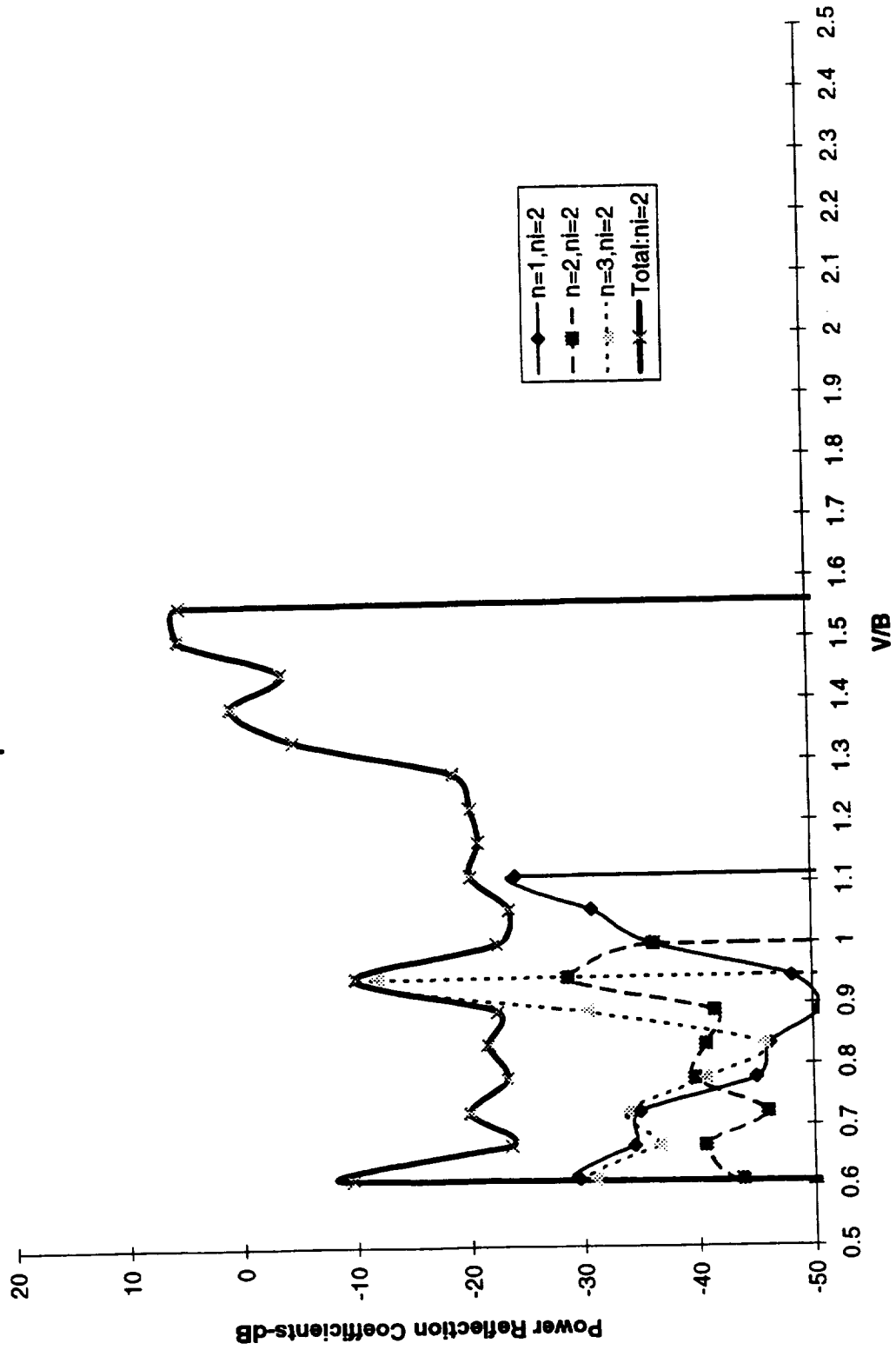
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

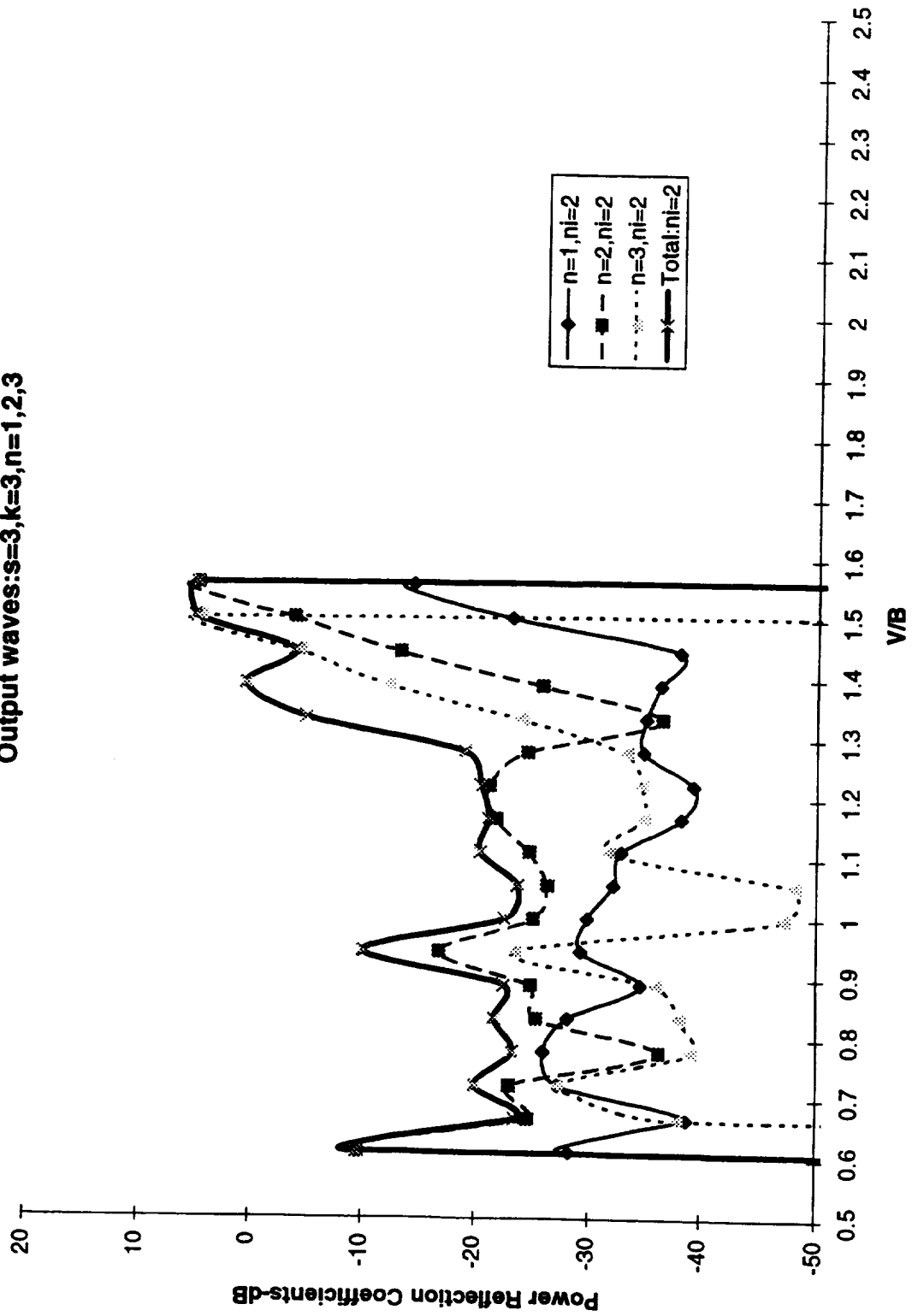
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

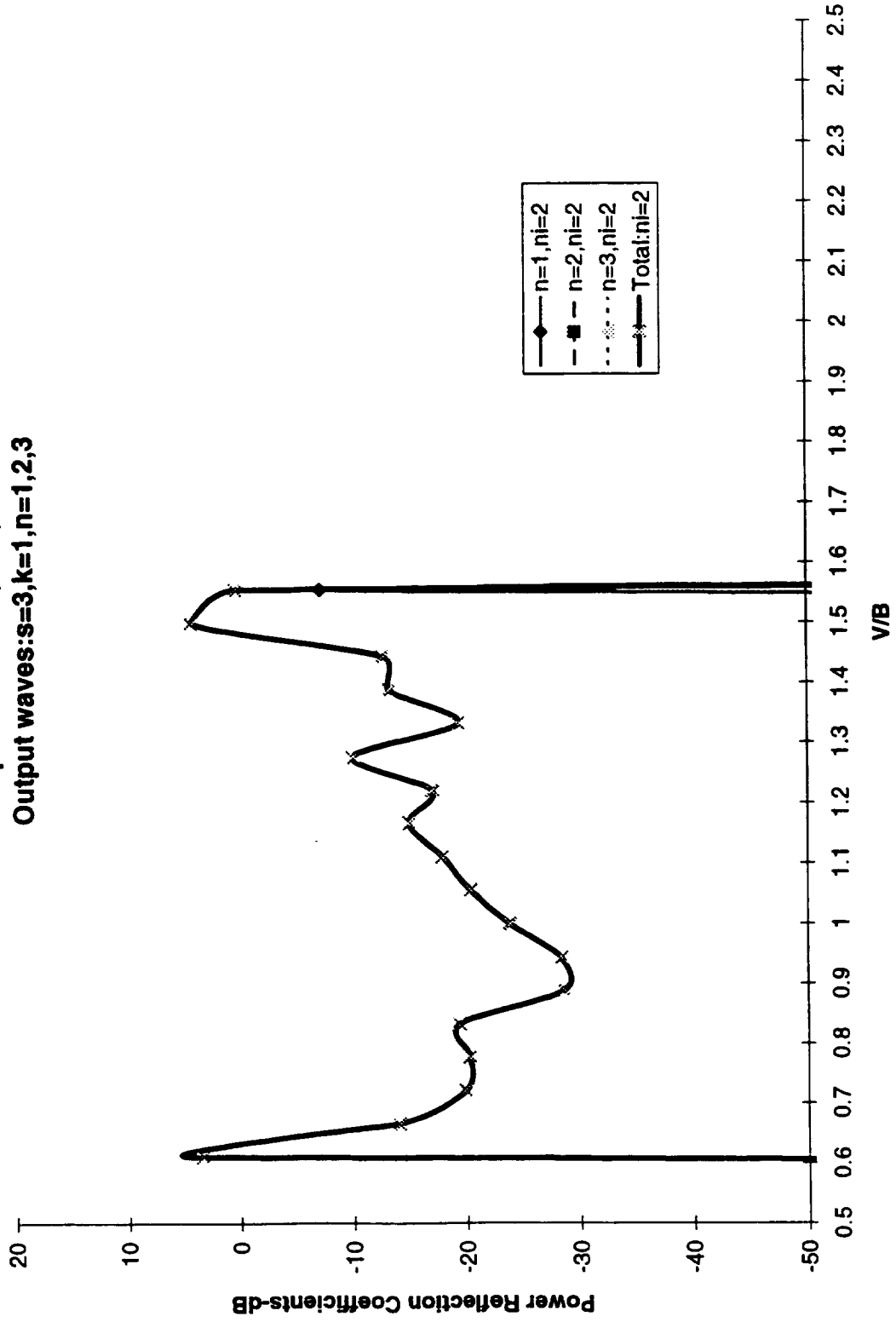
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

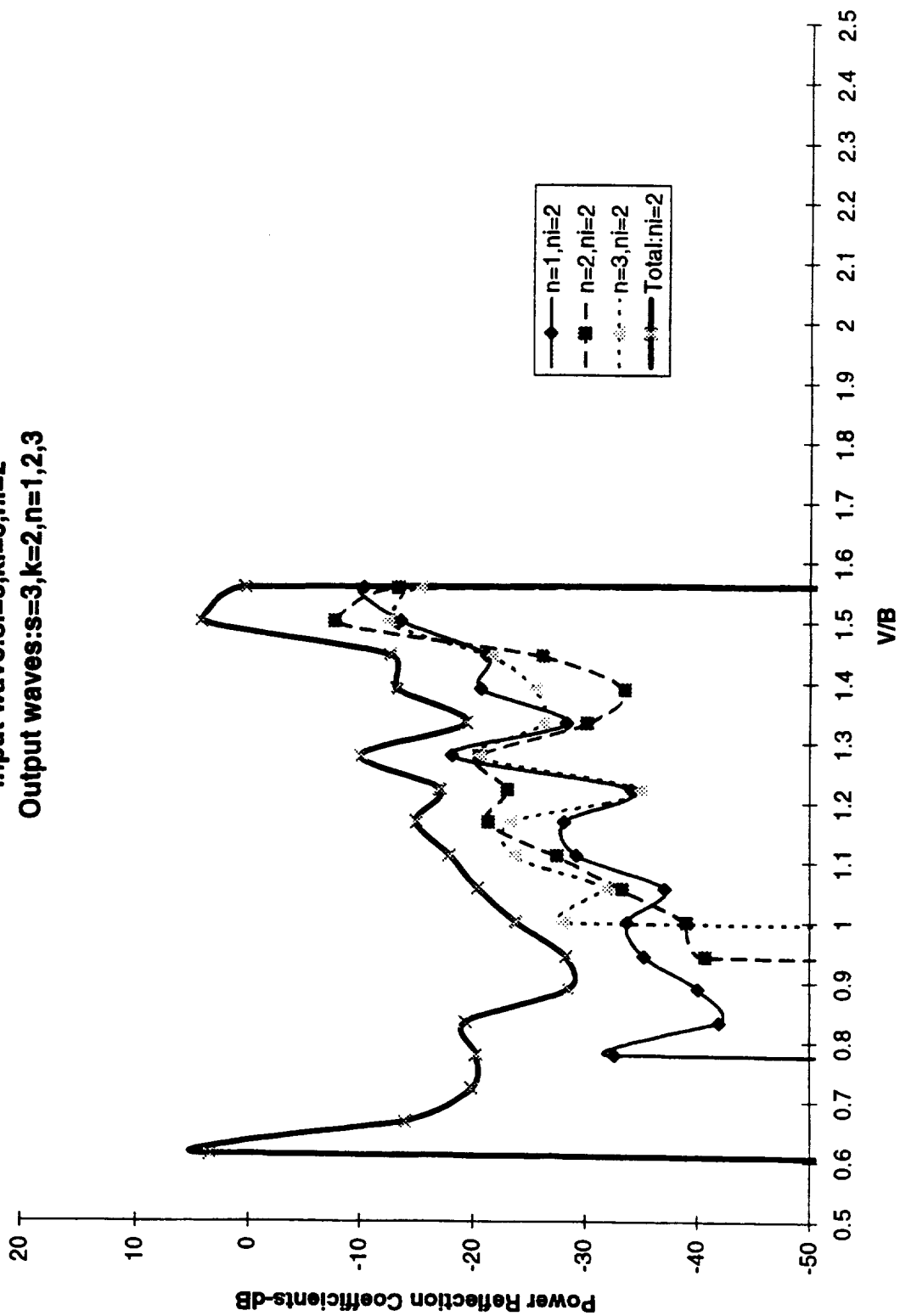
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

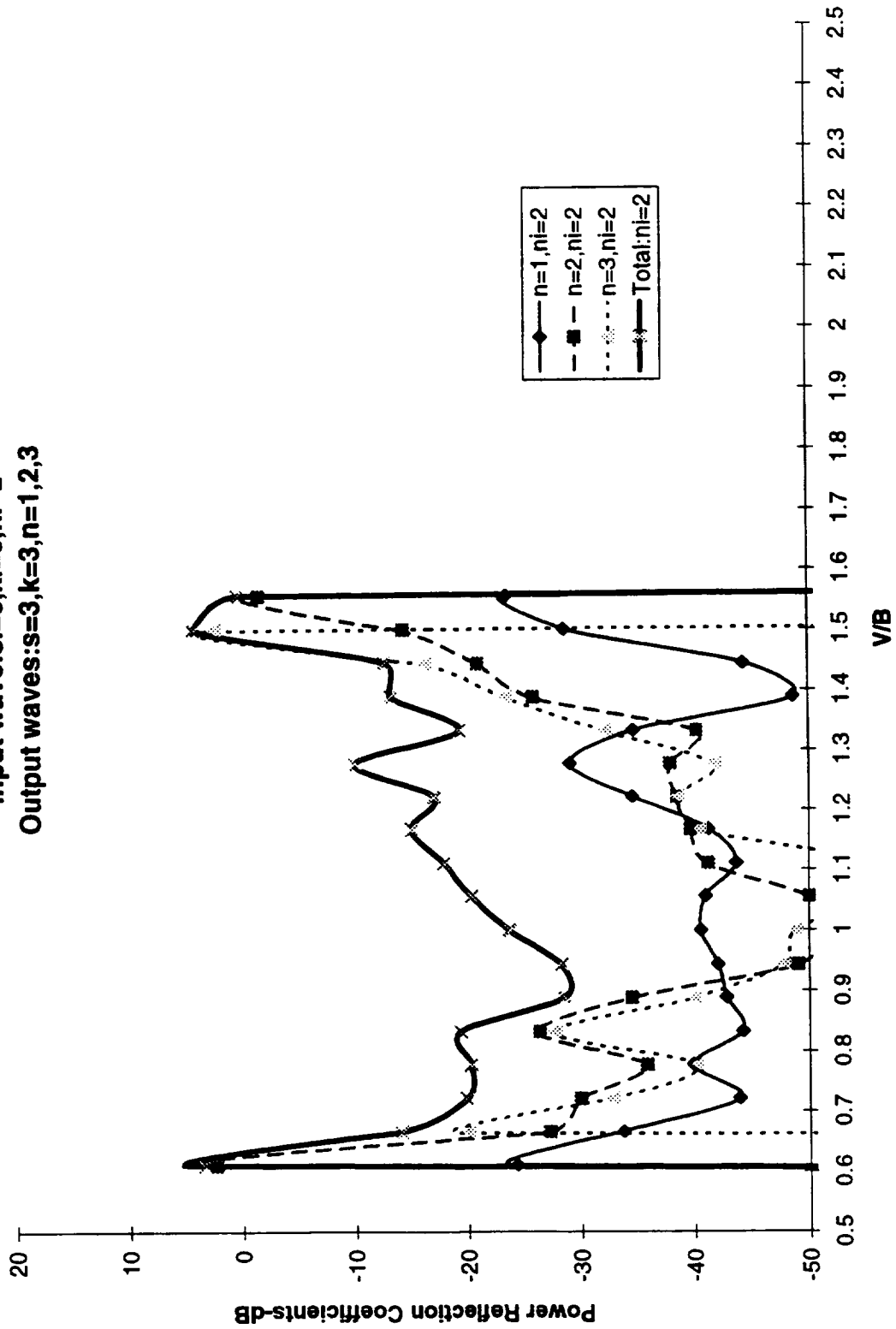
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

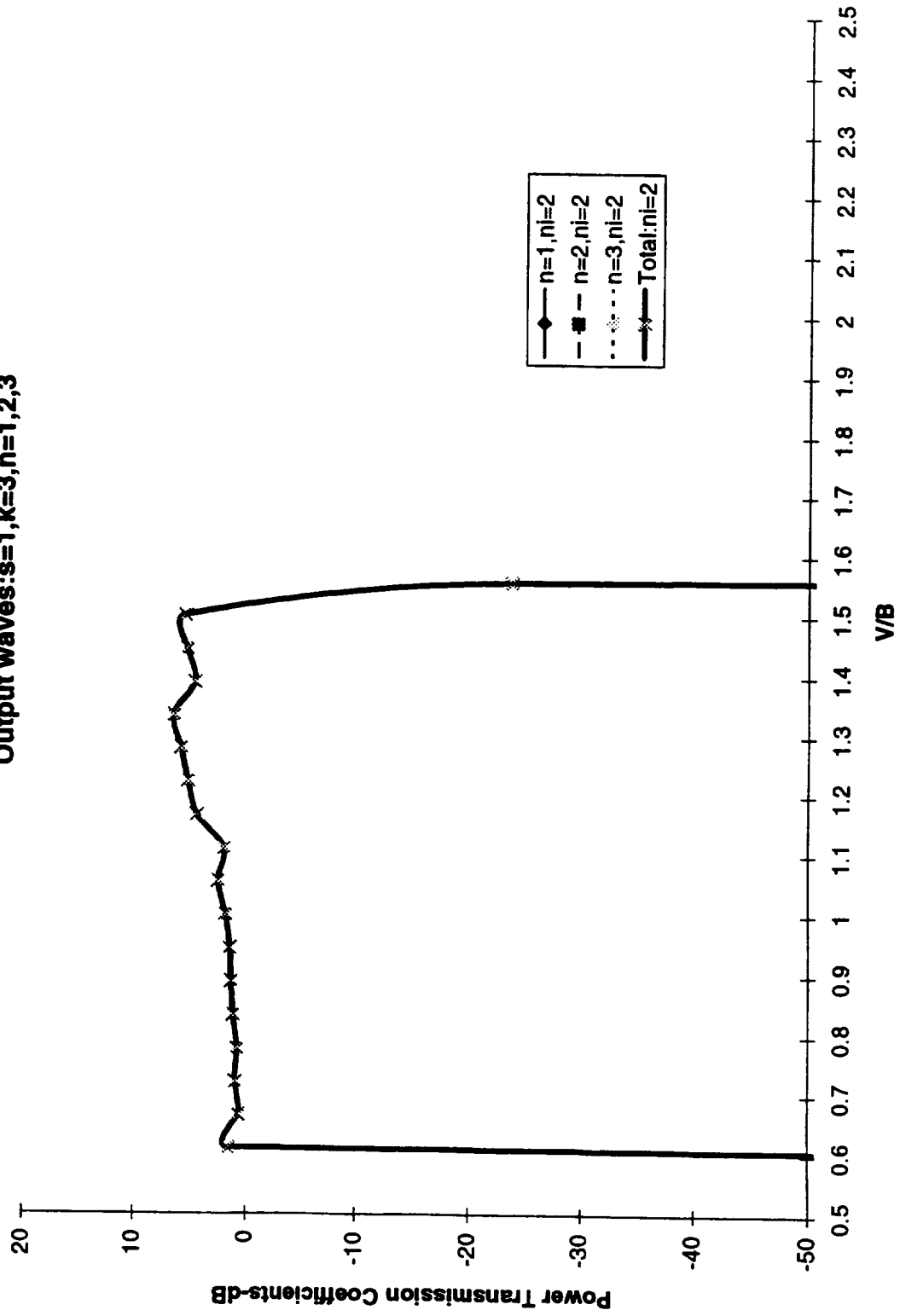
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=3, k_l=3, n_l=2$

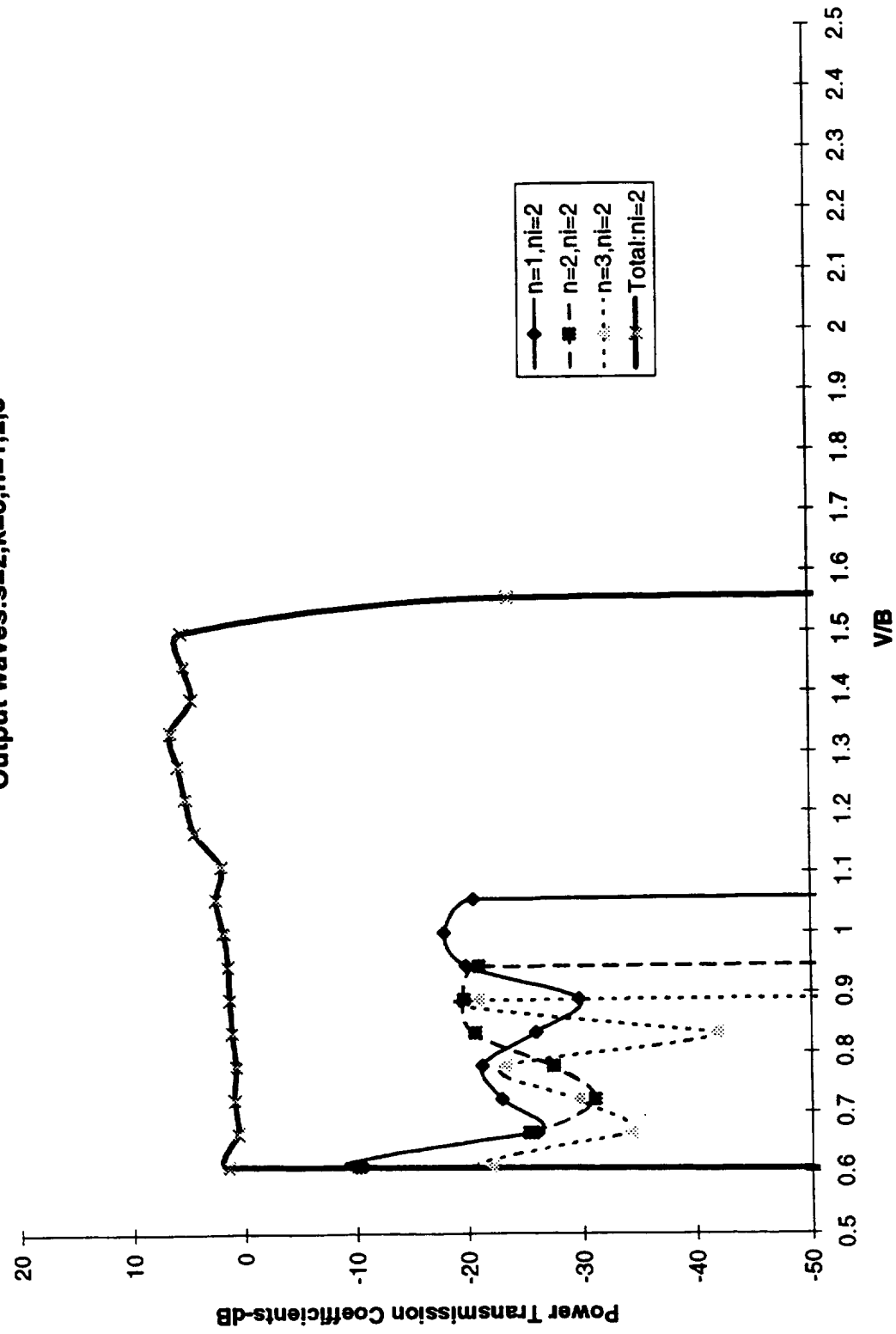
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

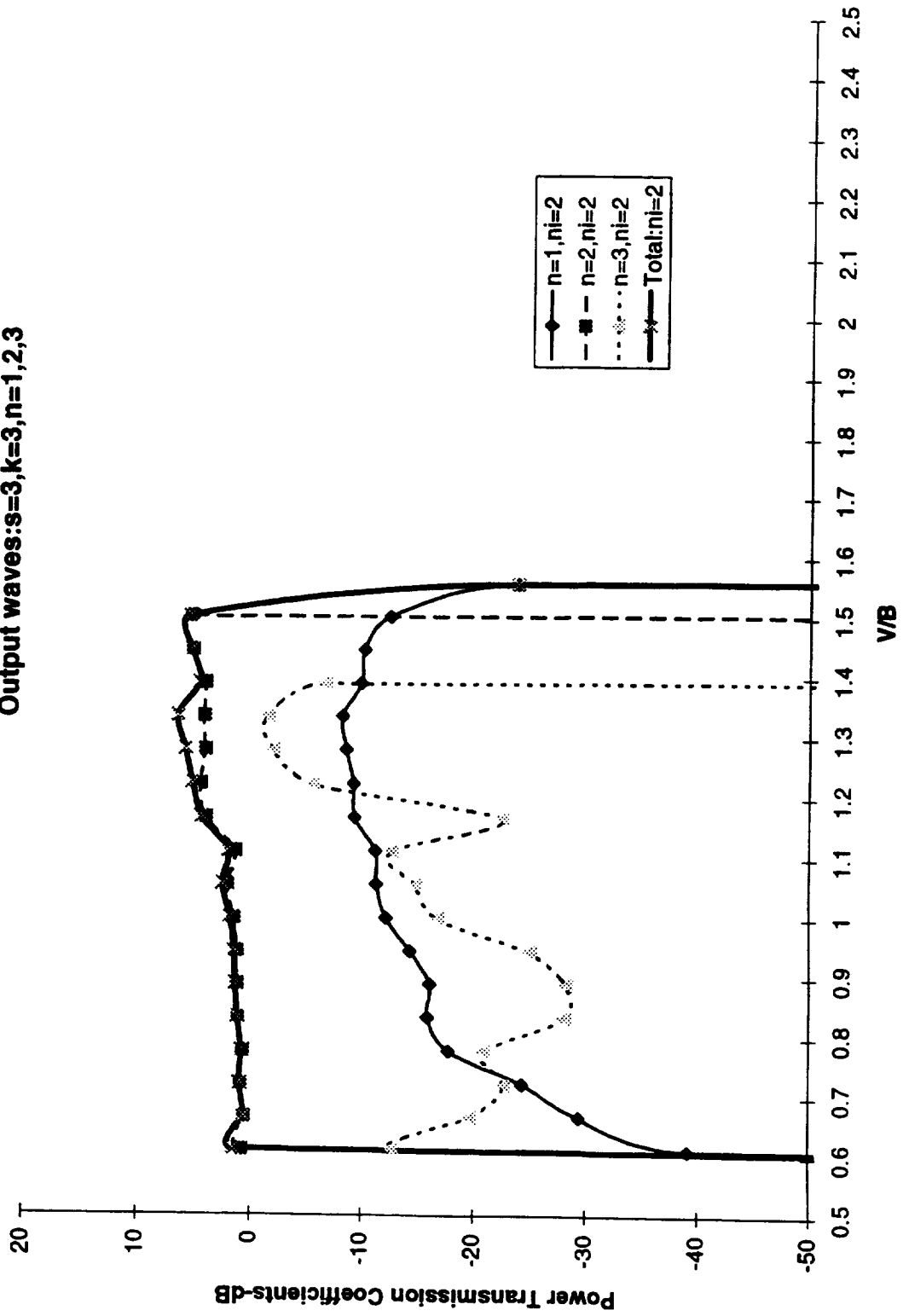
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

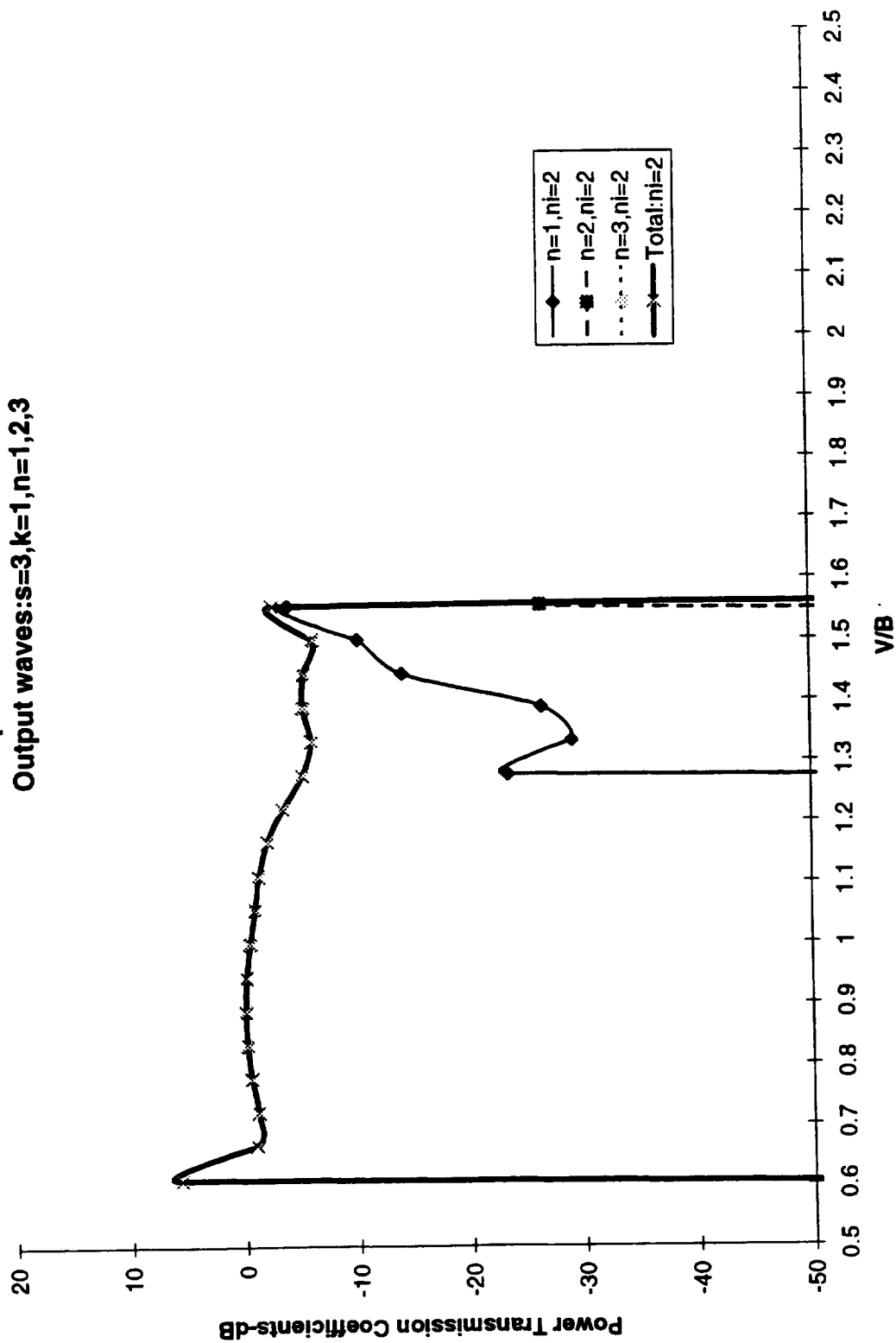
Output waves: $s=3, k=3, n=1, 2, 3$



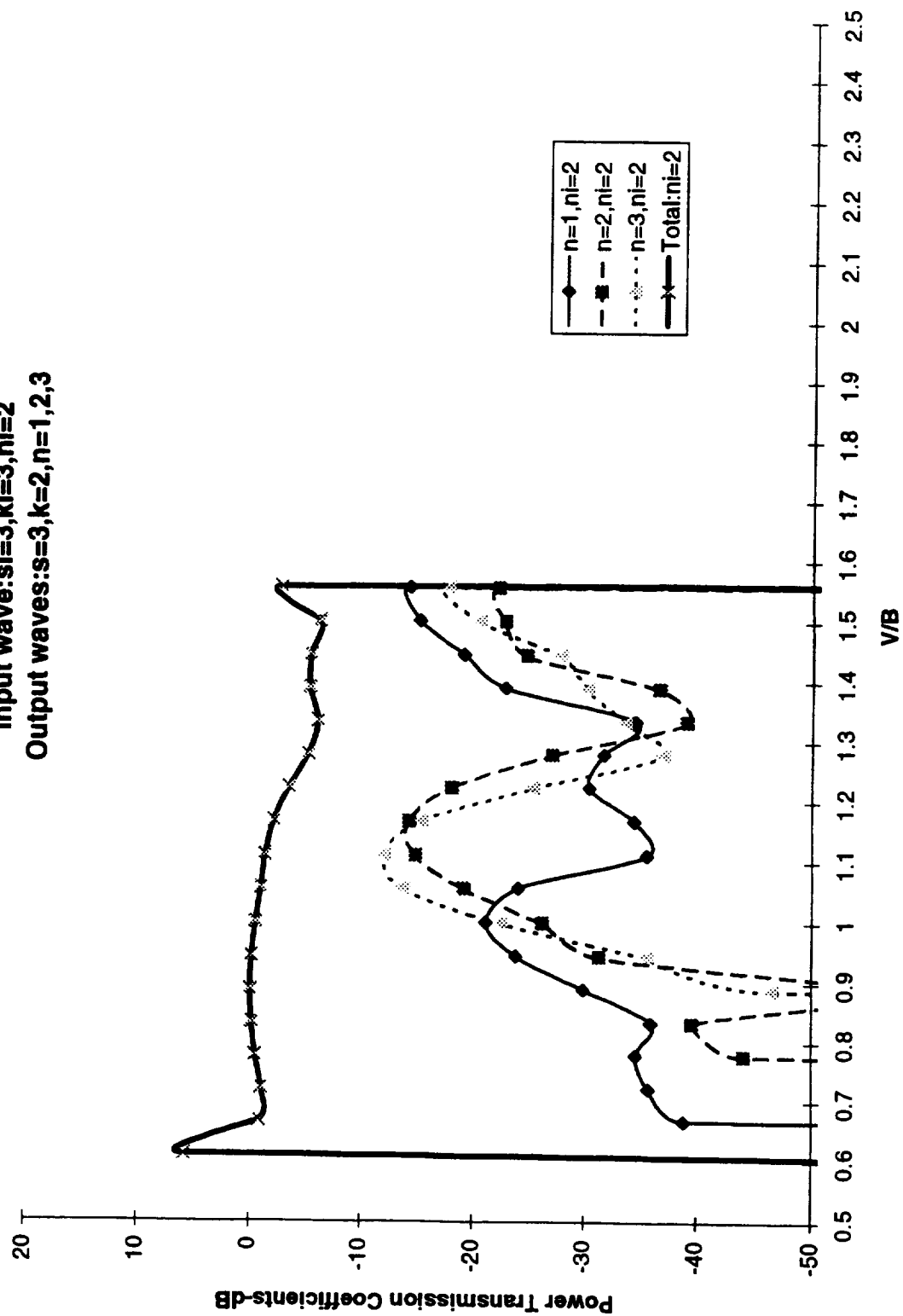
Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

Output waves: $s=3, k=1, n=1, 2, 3$



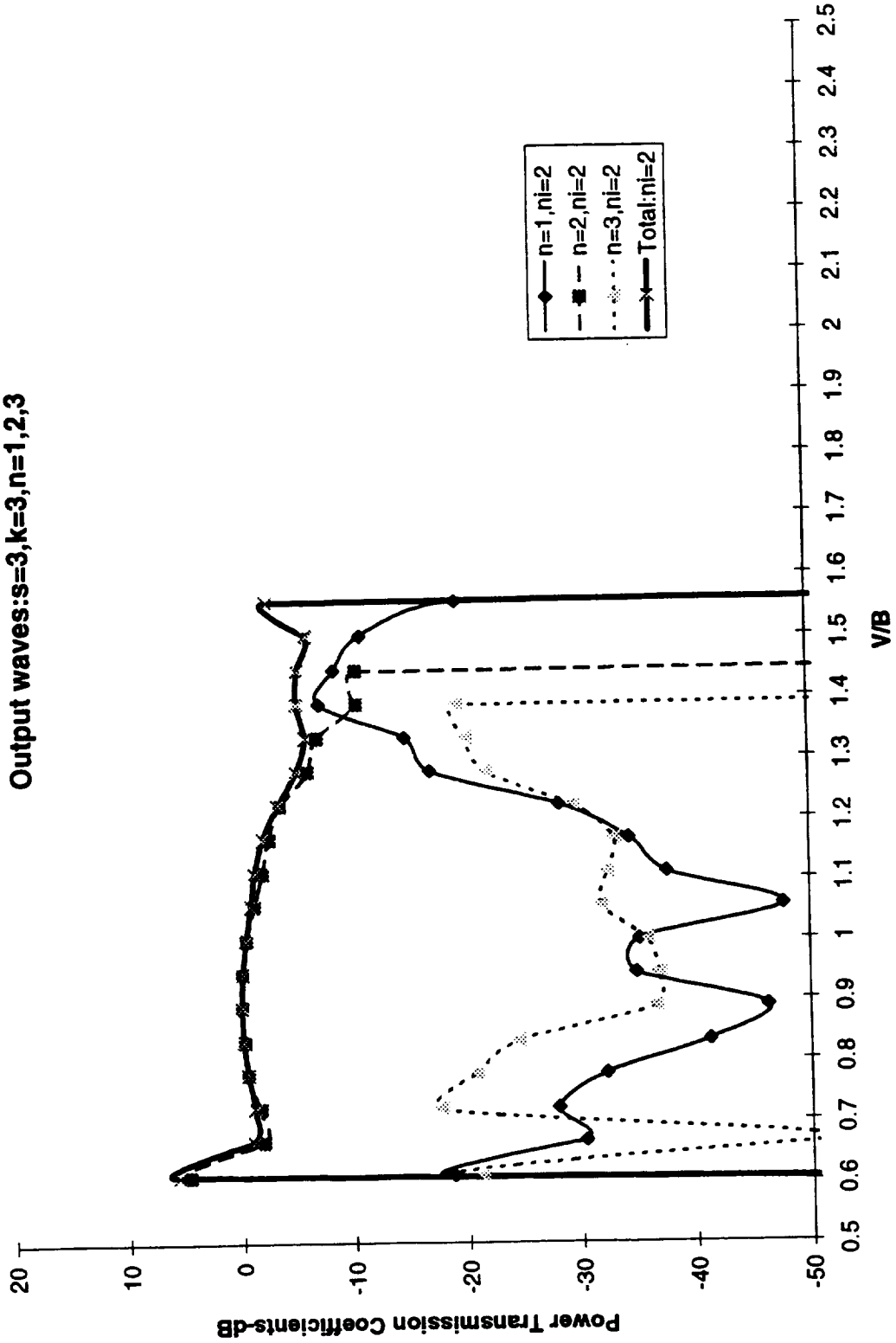
Stator Transmission-Mid Speed Case
Input wave: $s_i=3, k_i=3, n_i=2$
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=2$

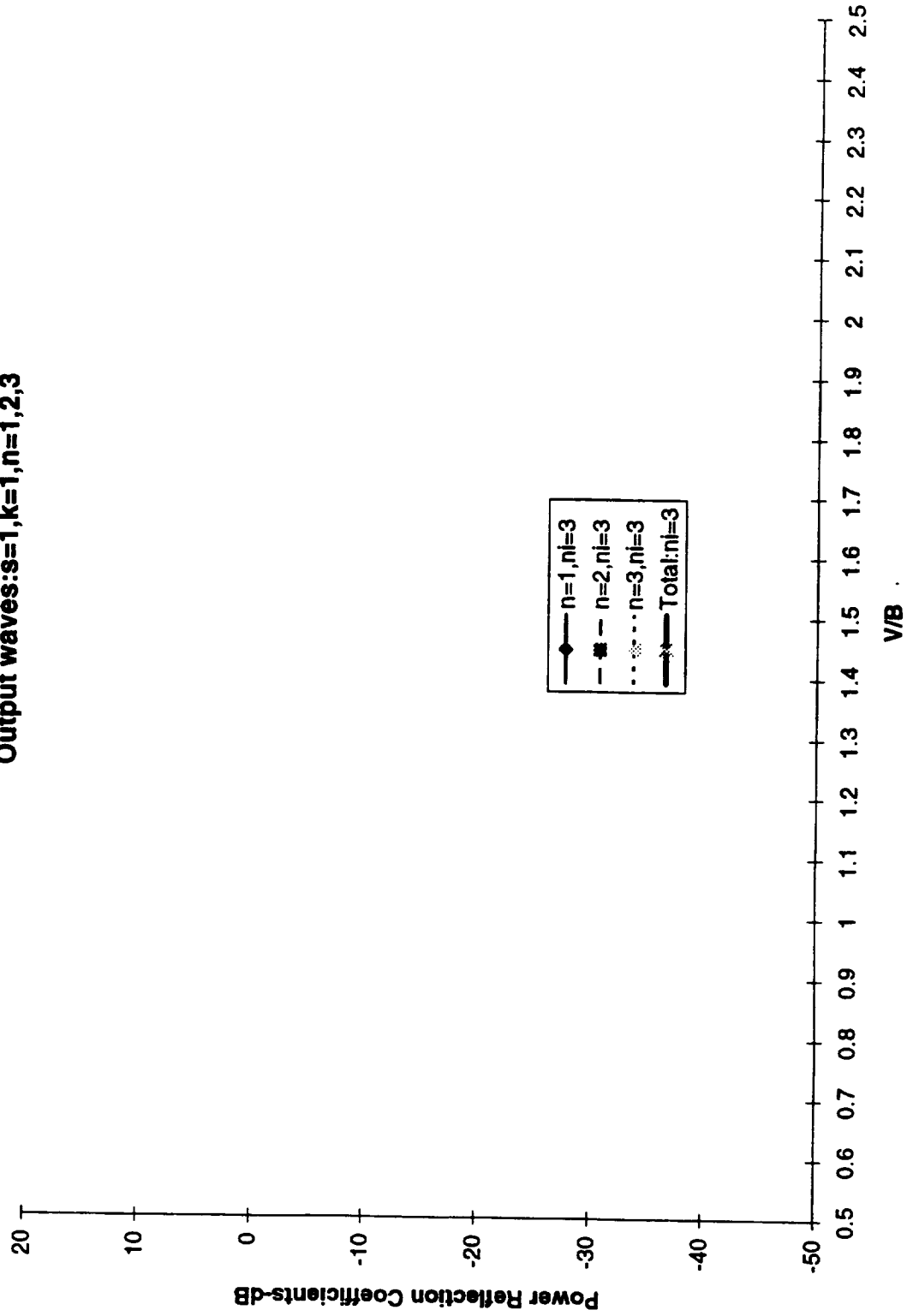
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

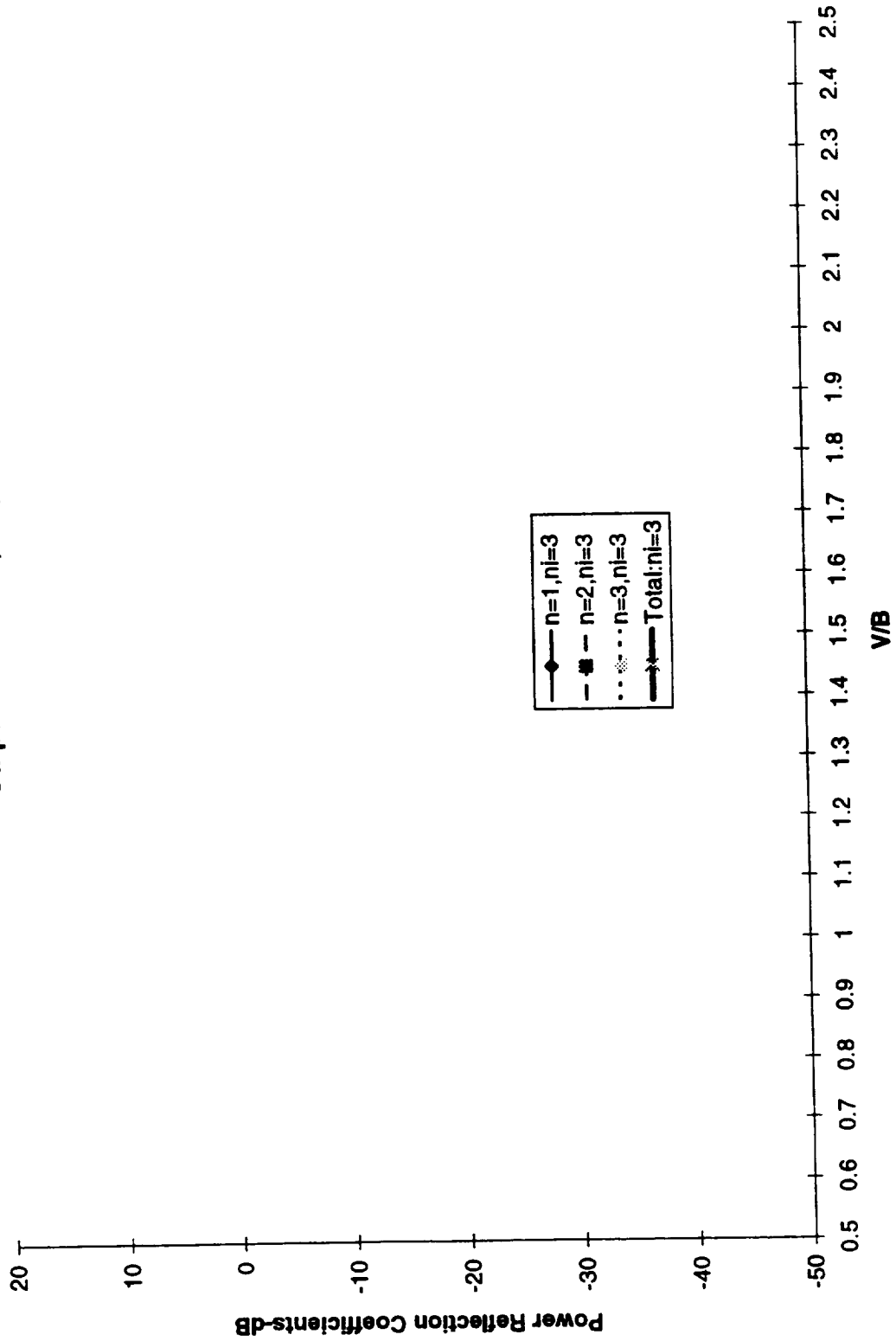
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=1, k_l=1, n_l=3$

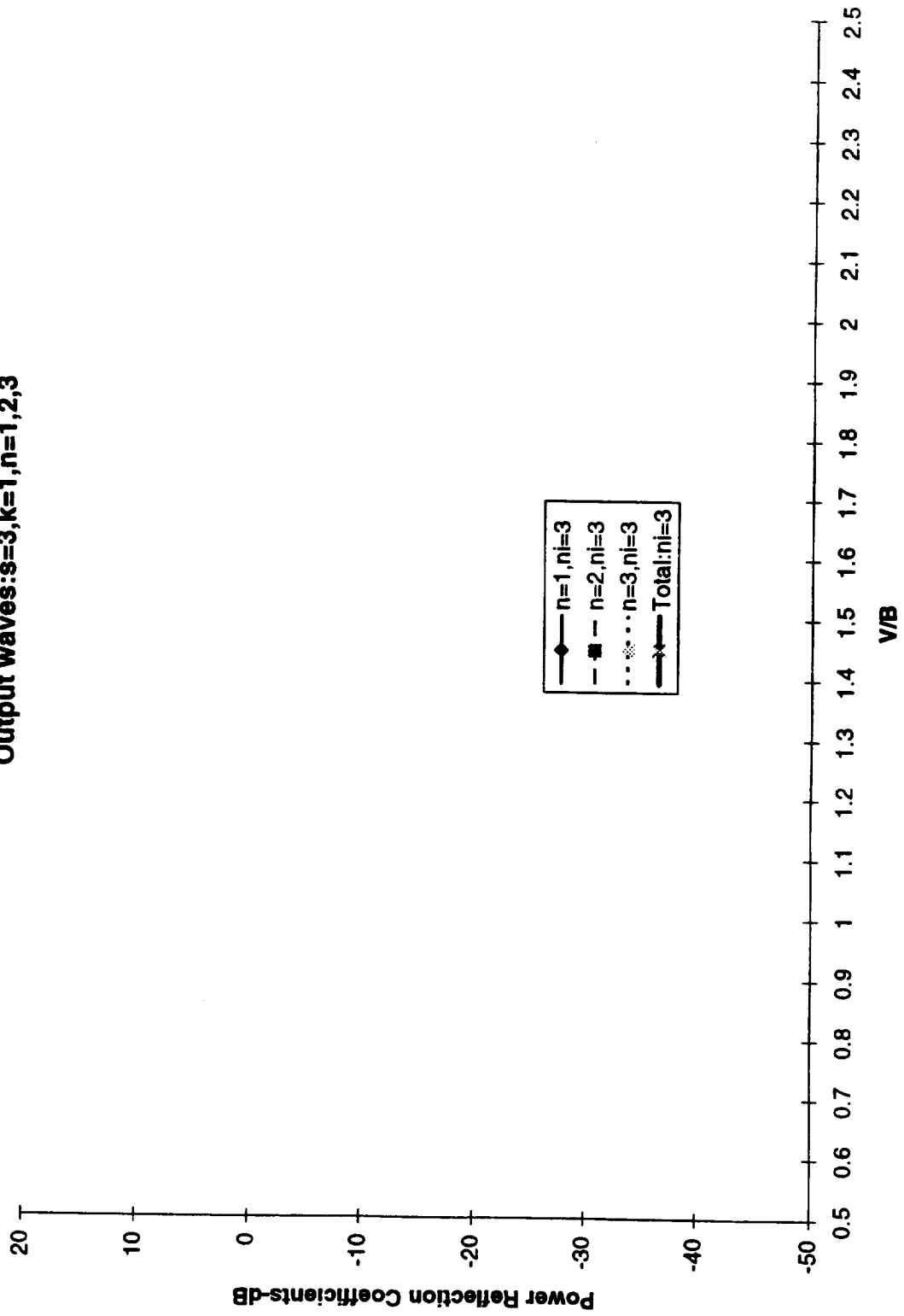
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

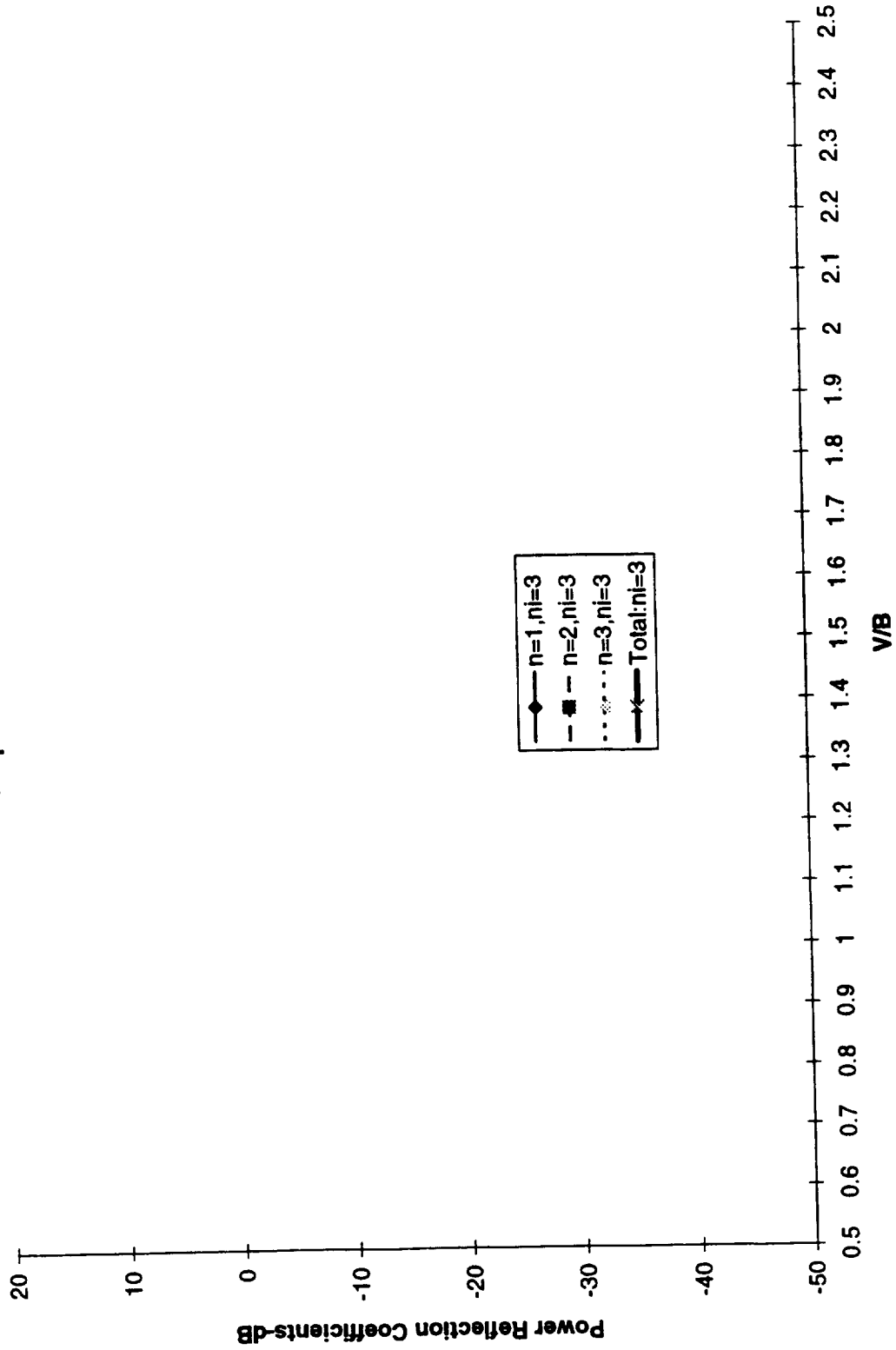
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

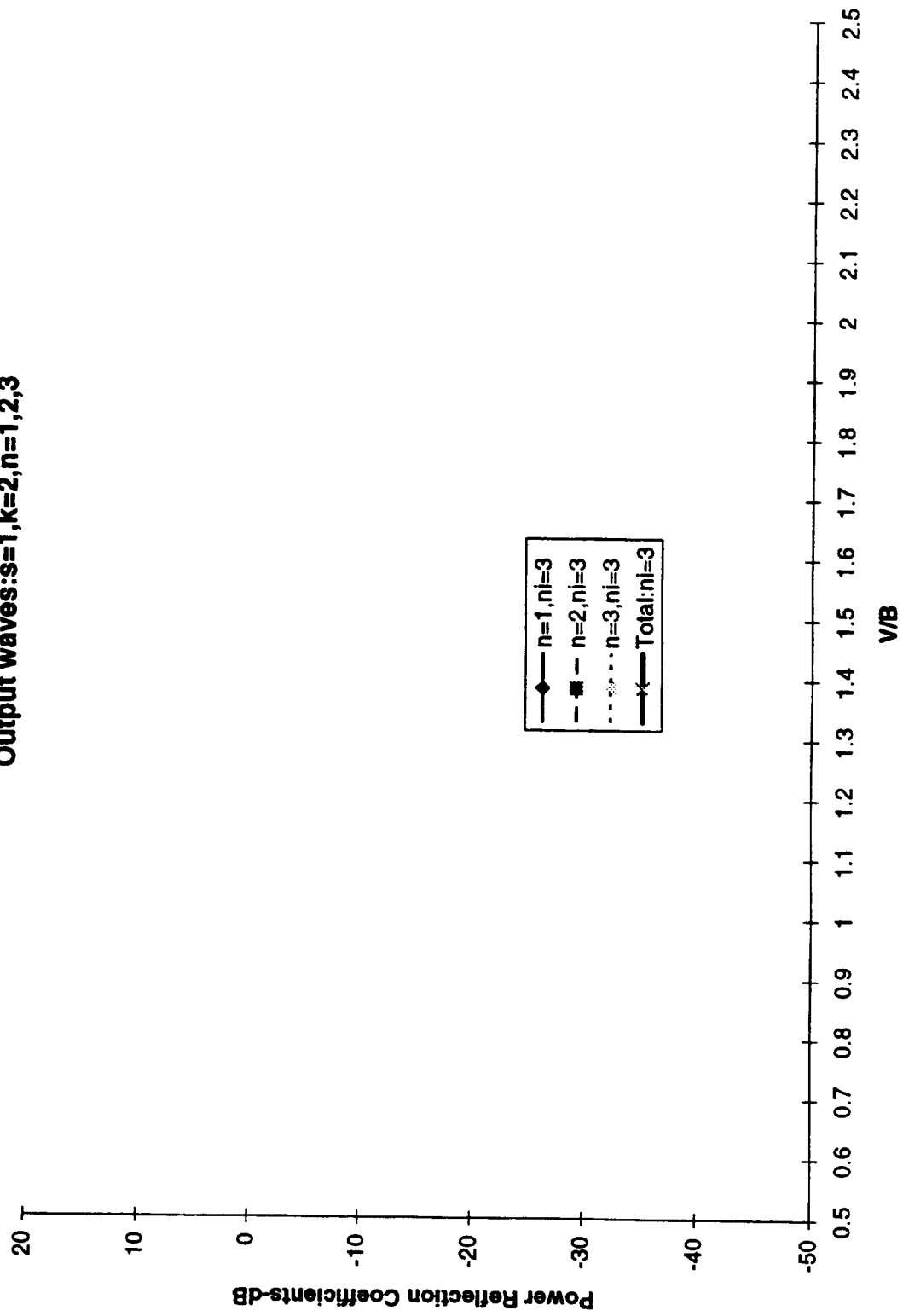
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_l=1, k_l=1, n_l=3$

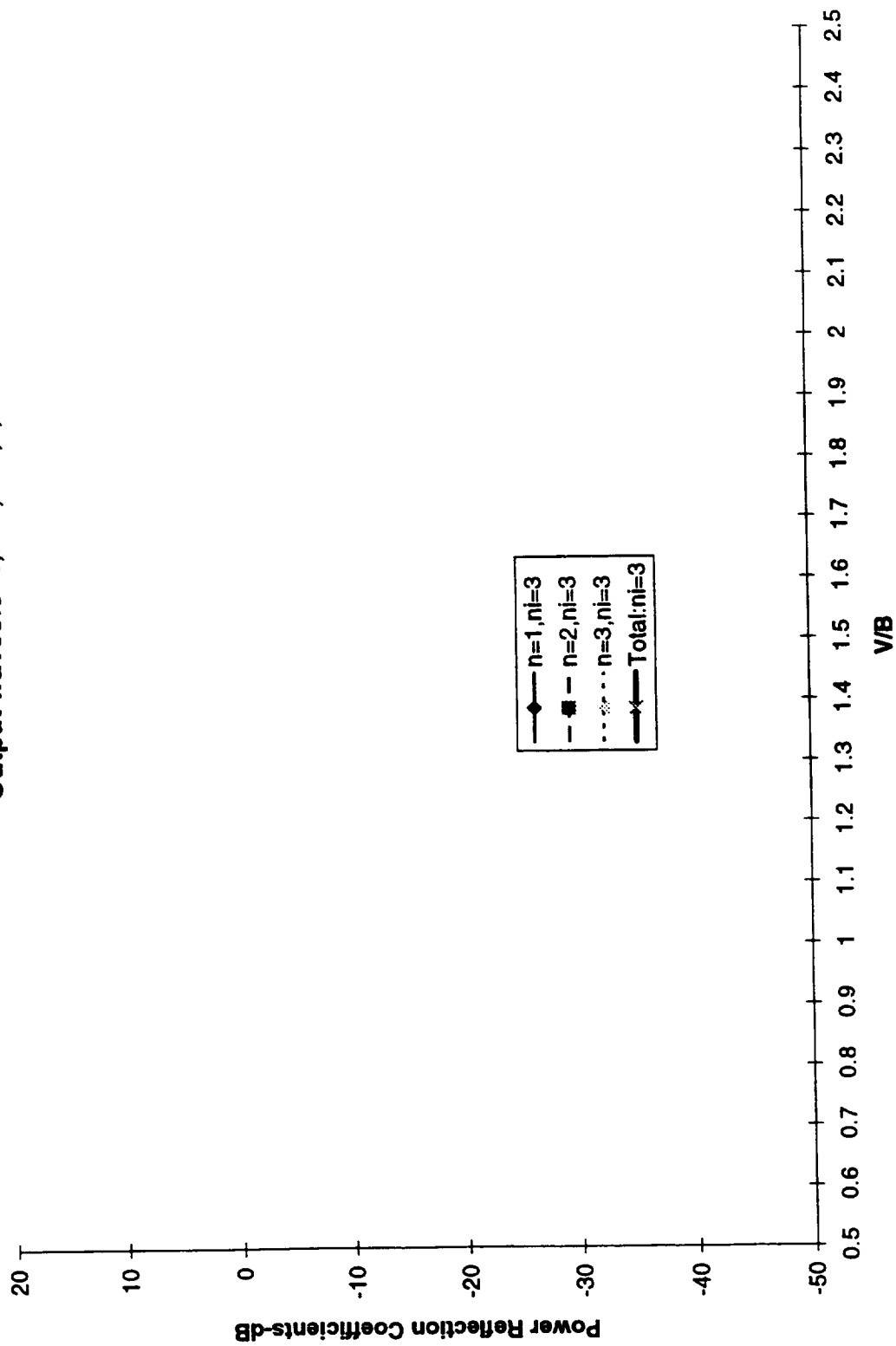
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

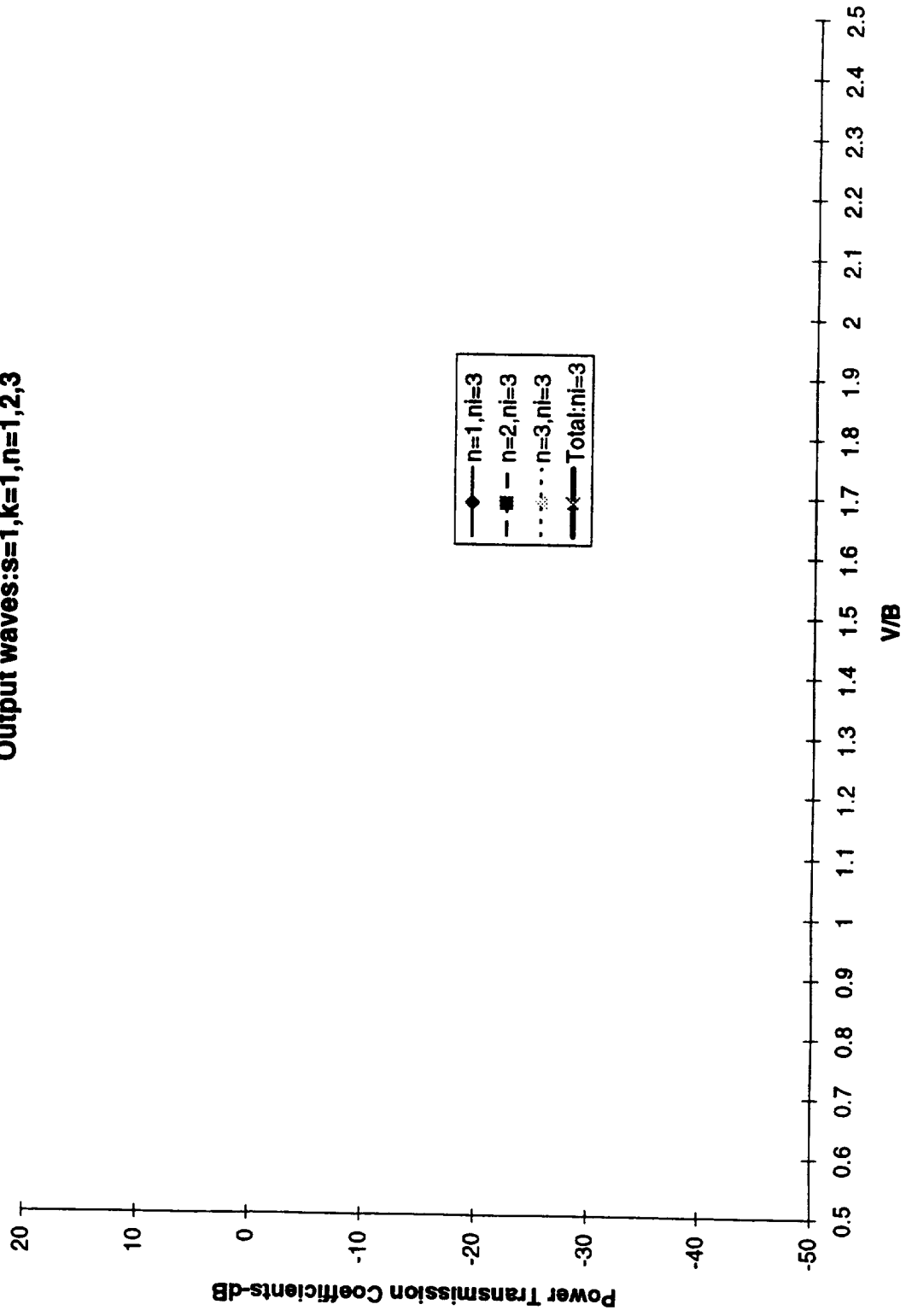
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

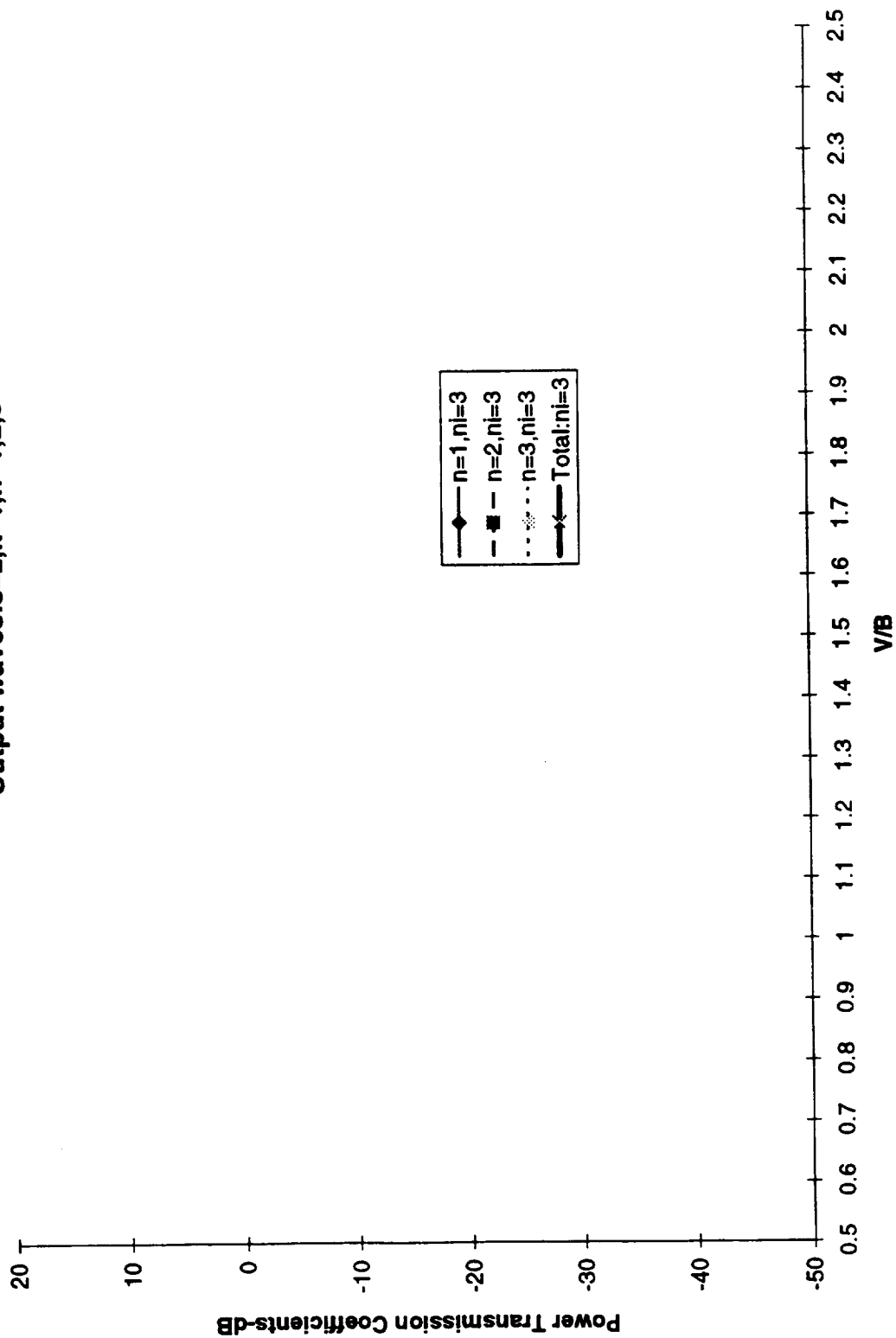
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

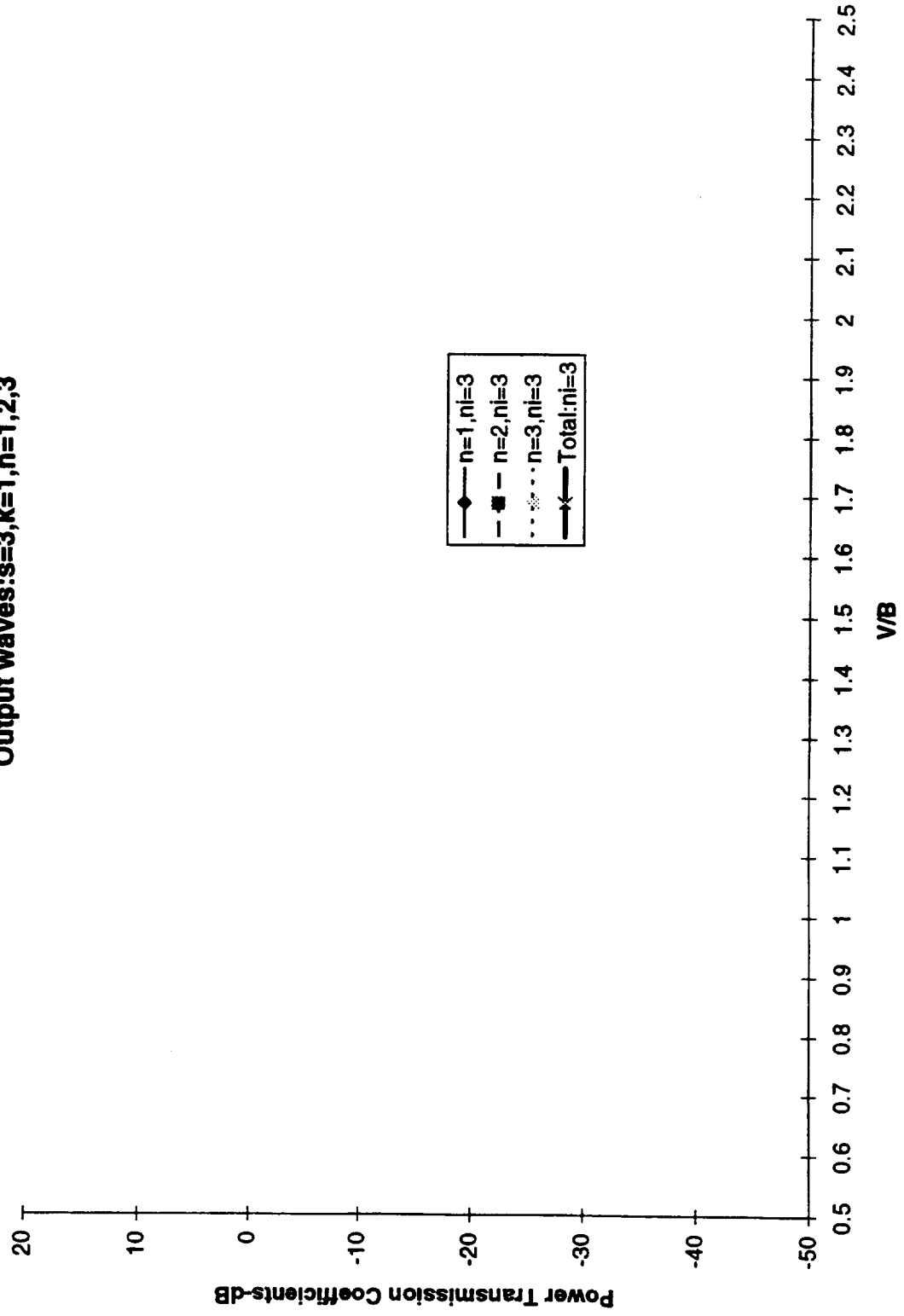
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

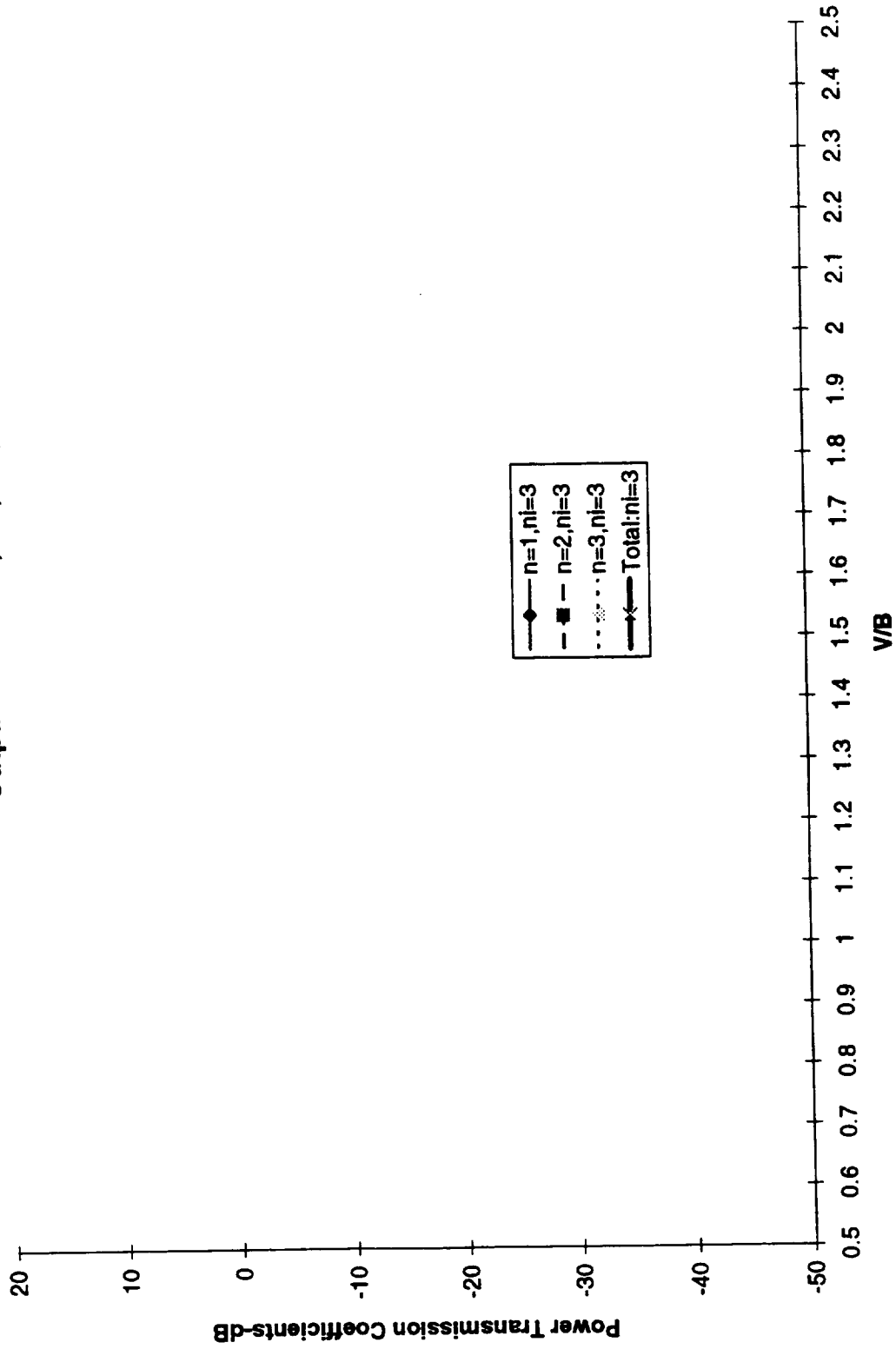
Output waves: $s=3, k=1, n=1, 2, 3$



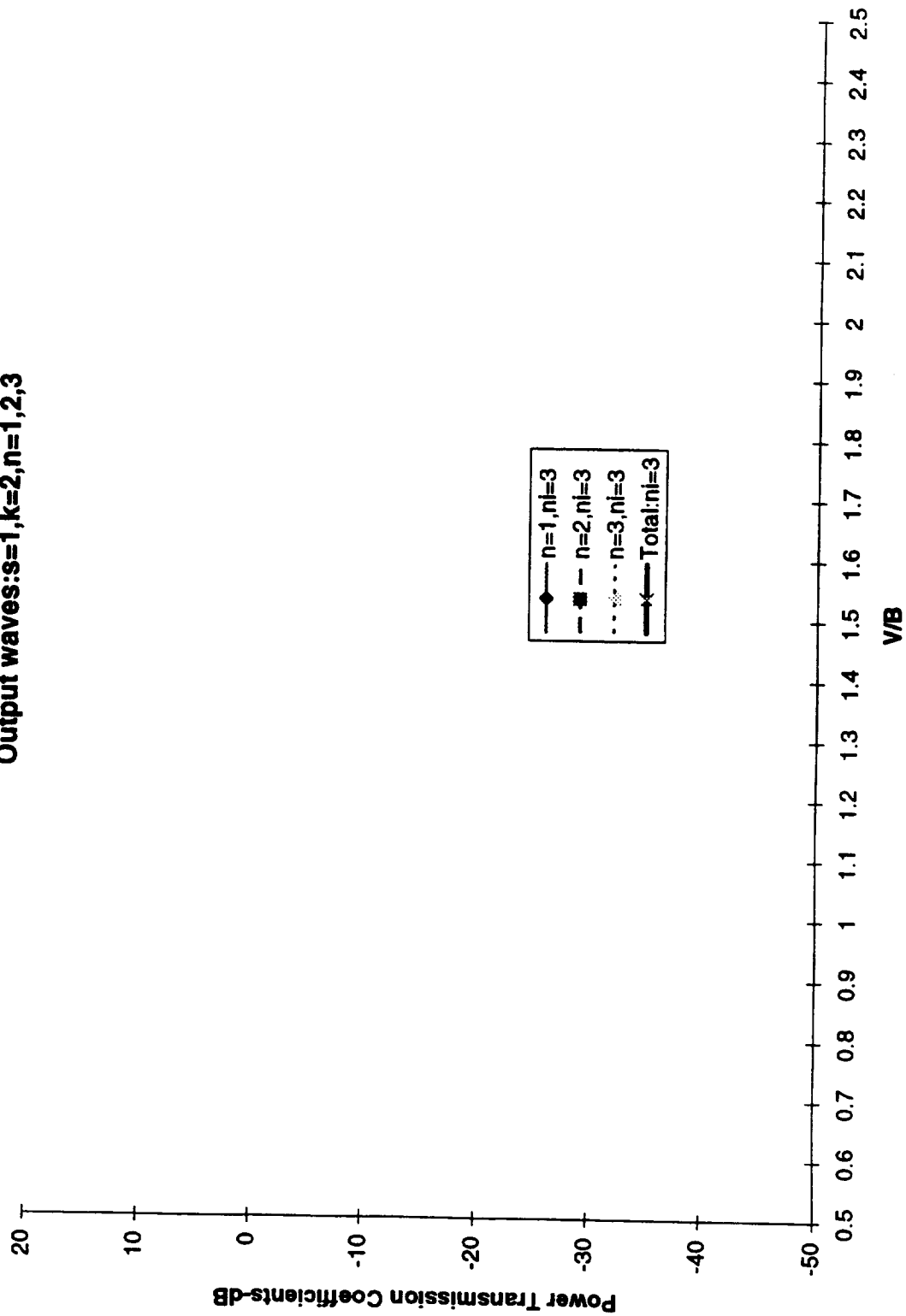
Stator Transmission-Mid Speed Case

Input wave: $sl=1, kl=1, nl=3$

Output waves: $s=1, k=1, n=1, 2, 3$



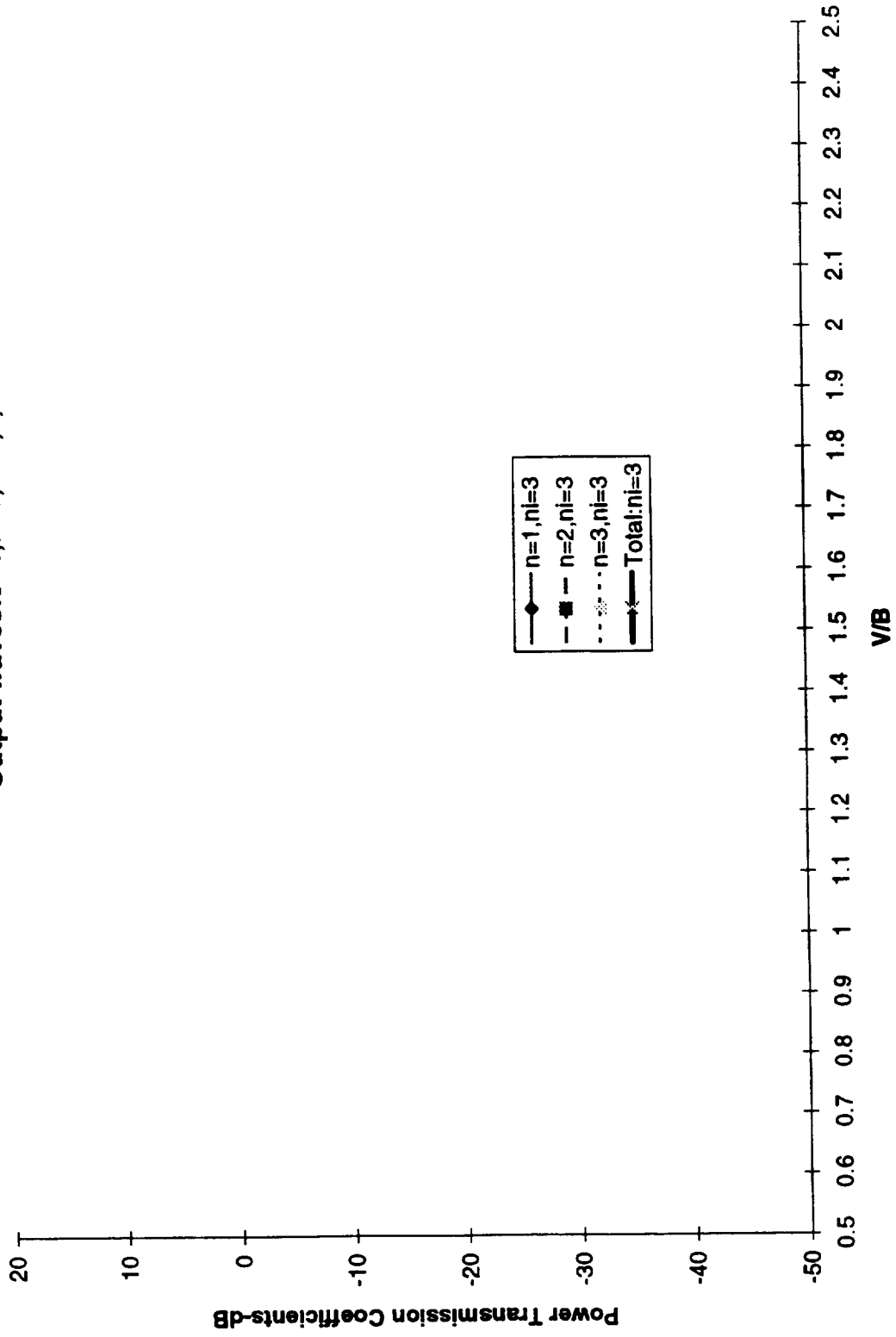
Stator Transmission-Mid Speed Case
Input wave: $s_i=1, k_i=1, n_i=3$
Output wave: $s=1, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=1, n_i=3$

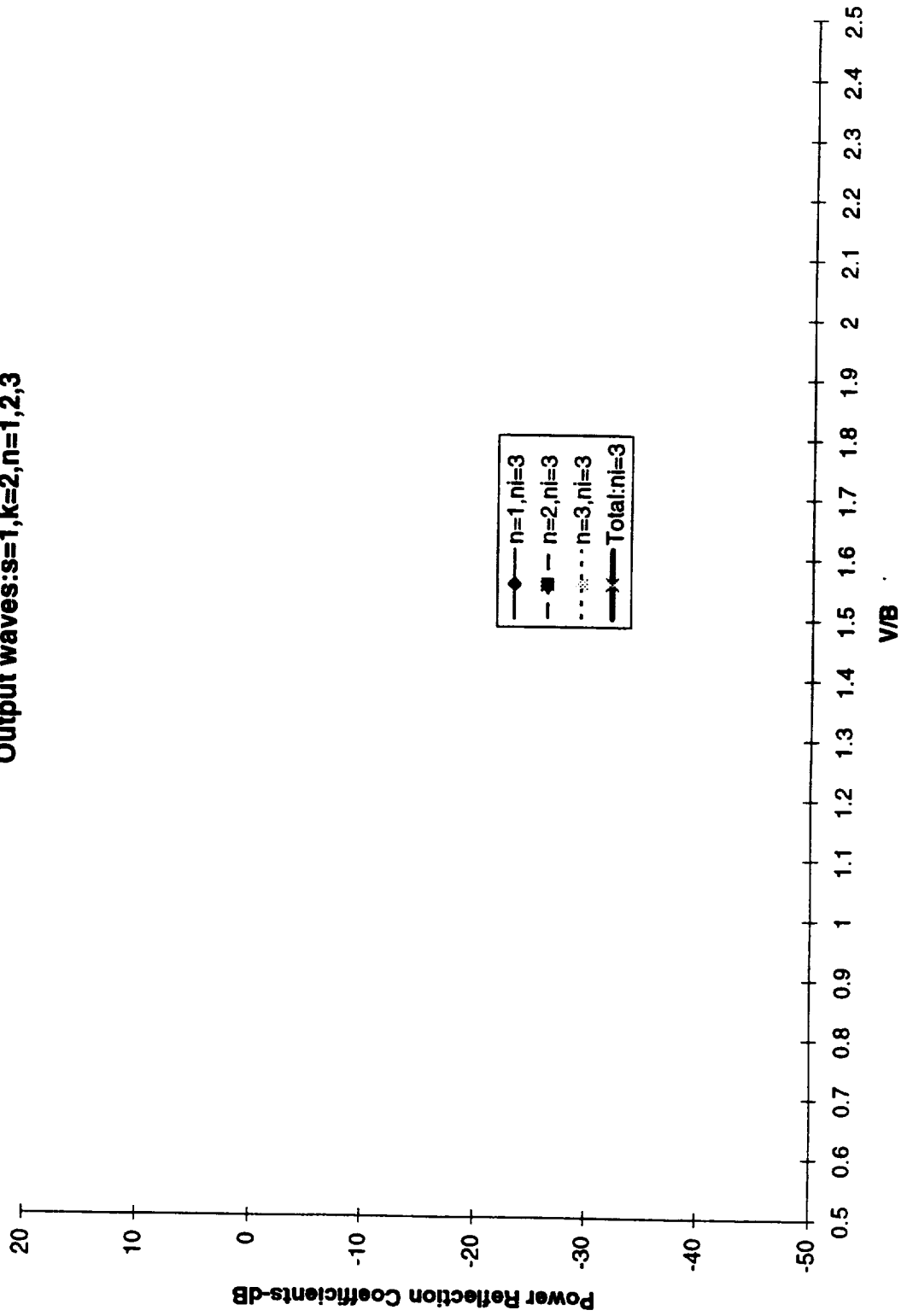
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=1, k_l=2, n_l=3$

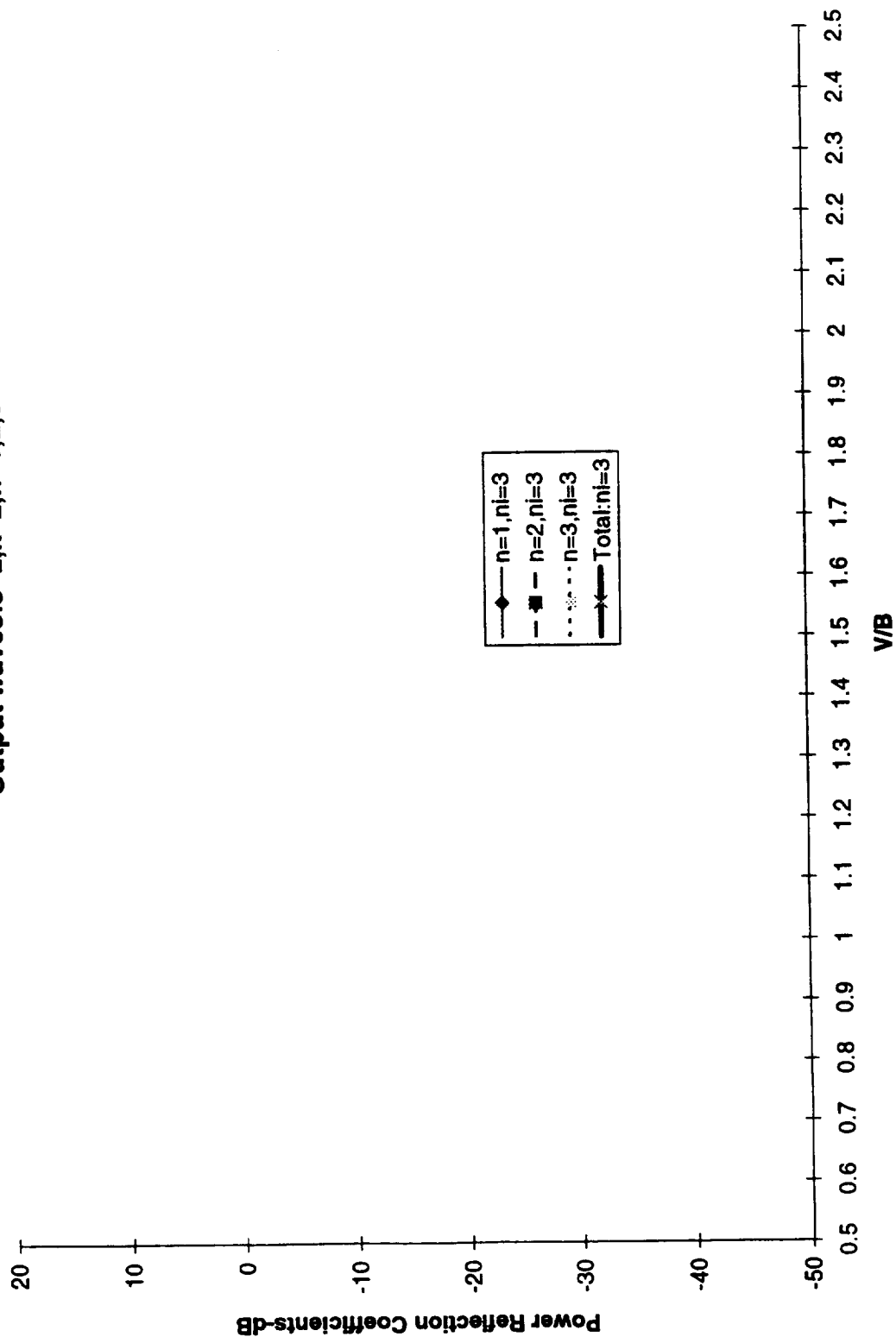
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=3$

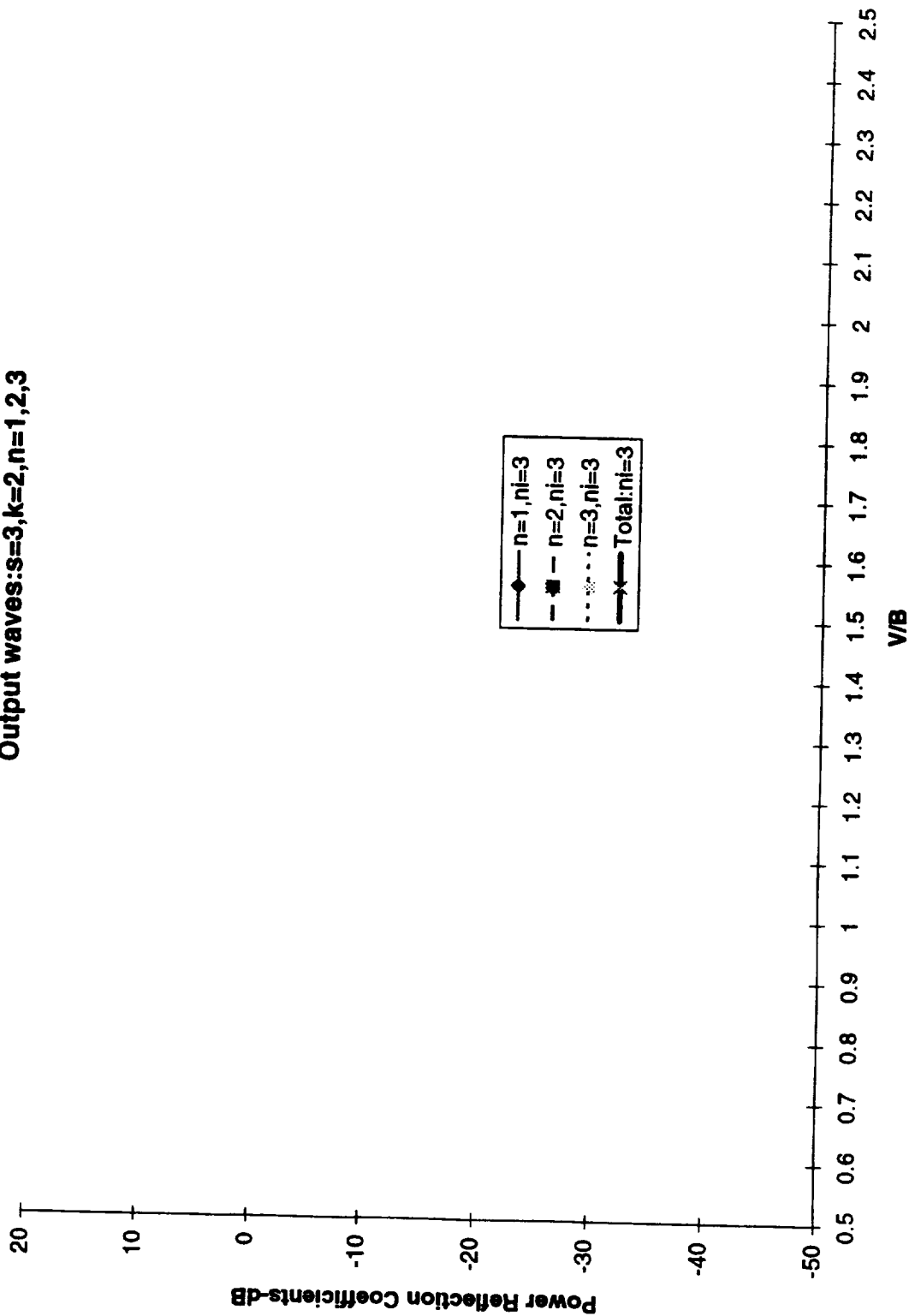
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=1, k_l=2, n_l=3$

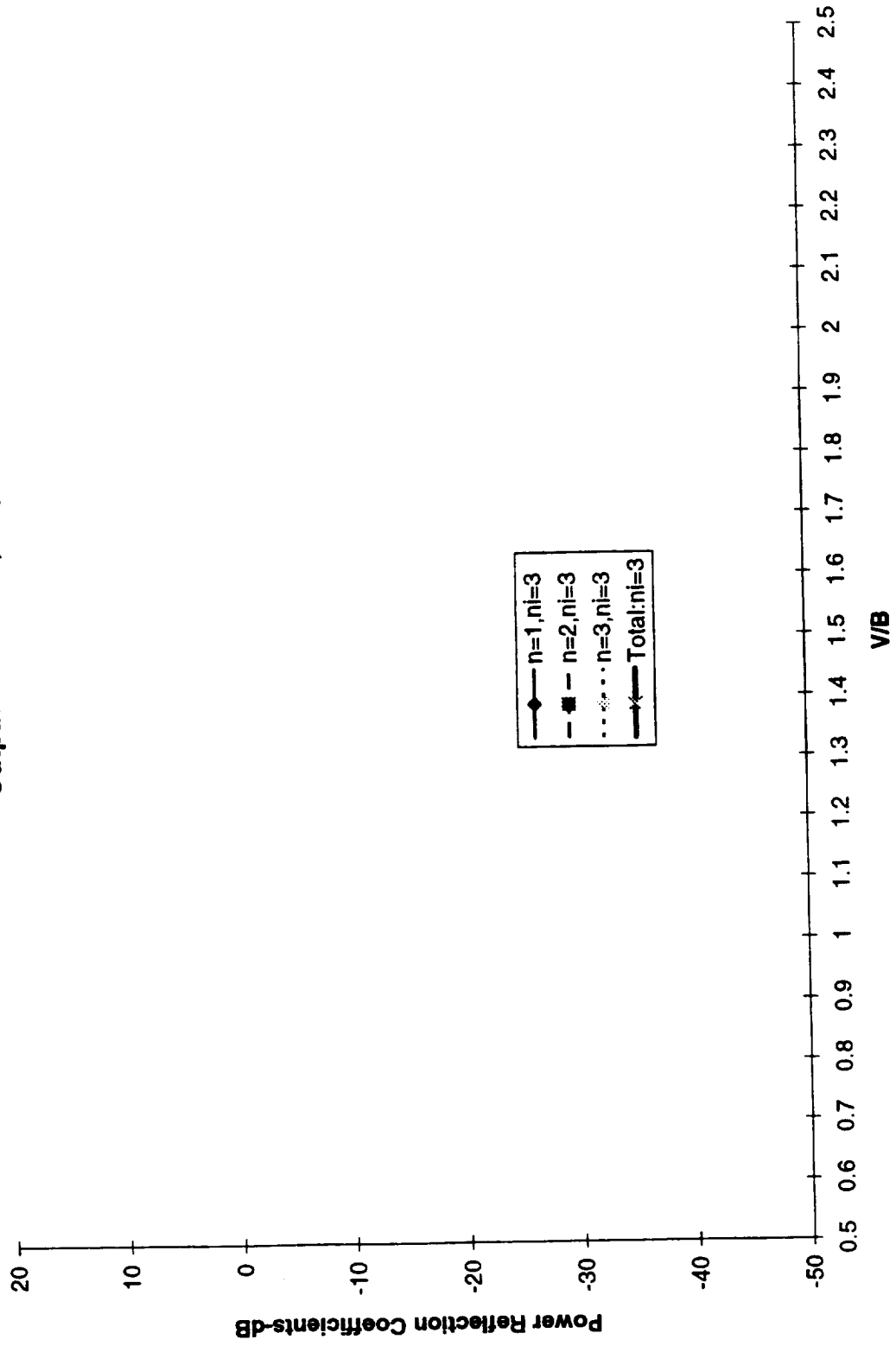
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=3$

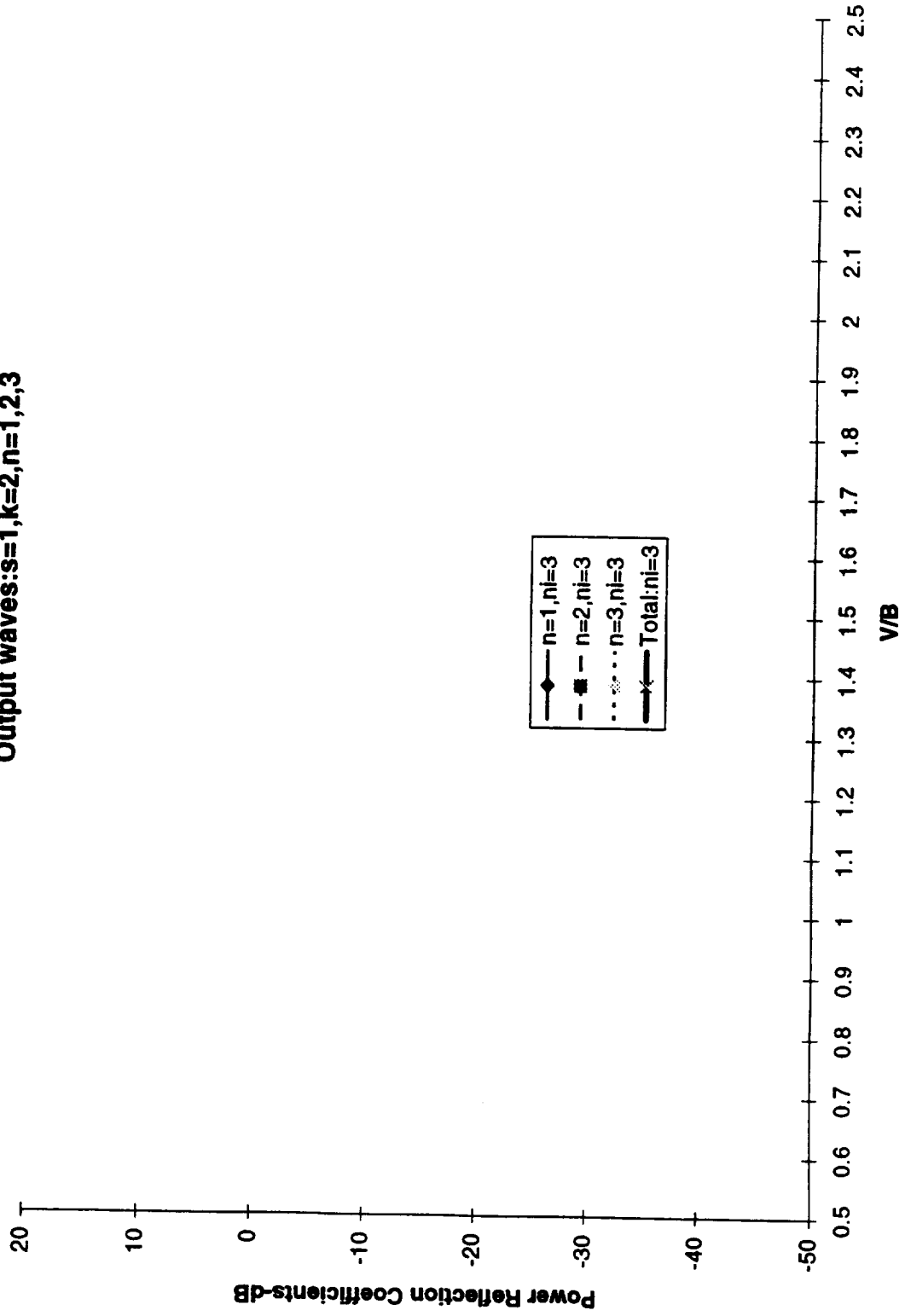
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_l=1, k_l=2, n_l=3$

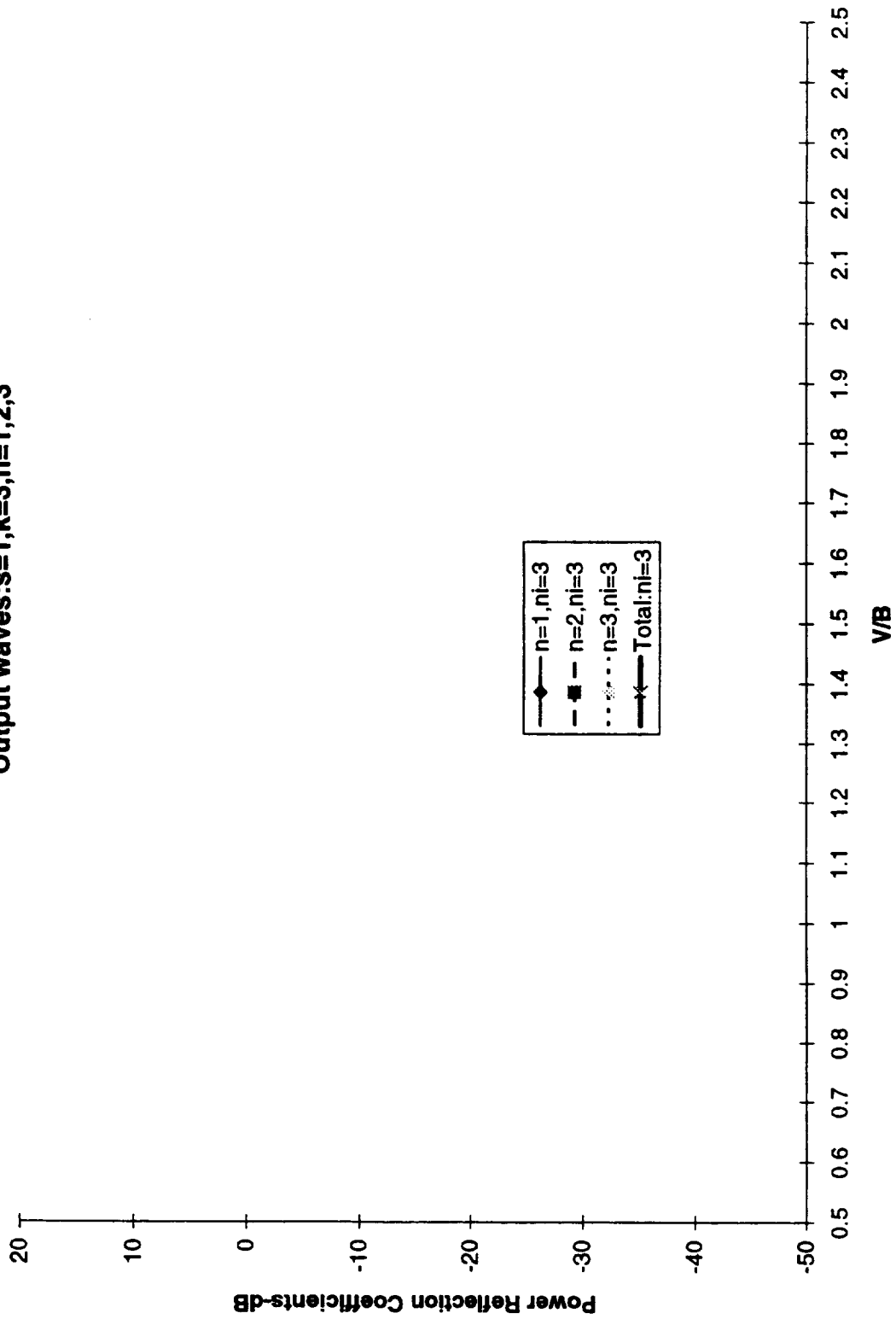
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=3$

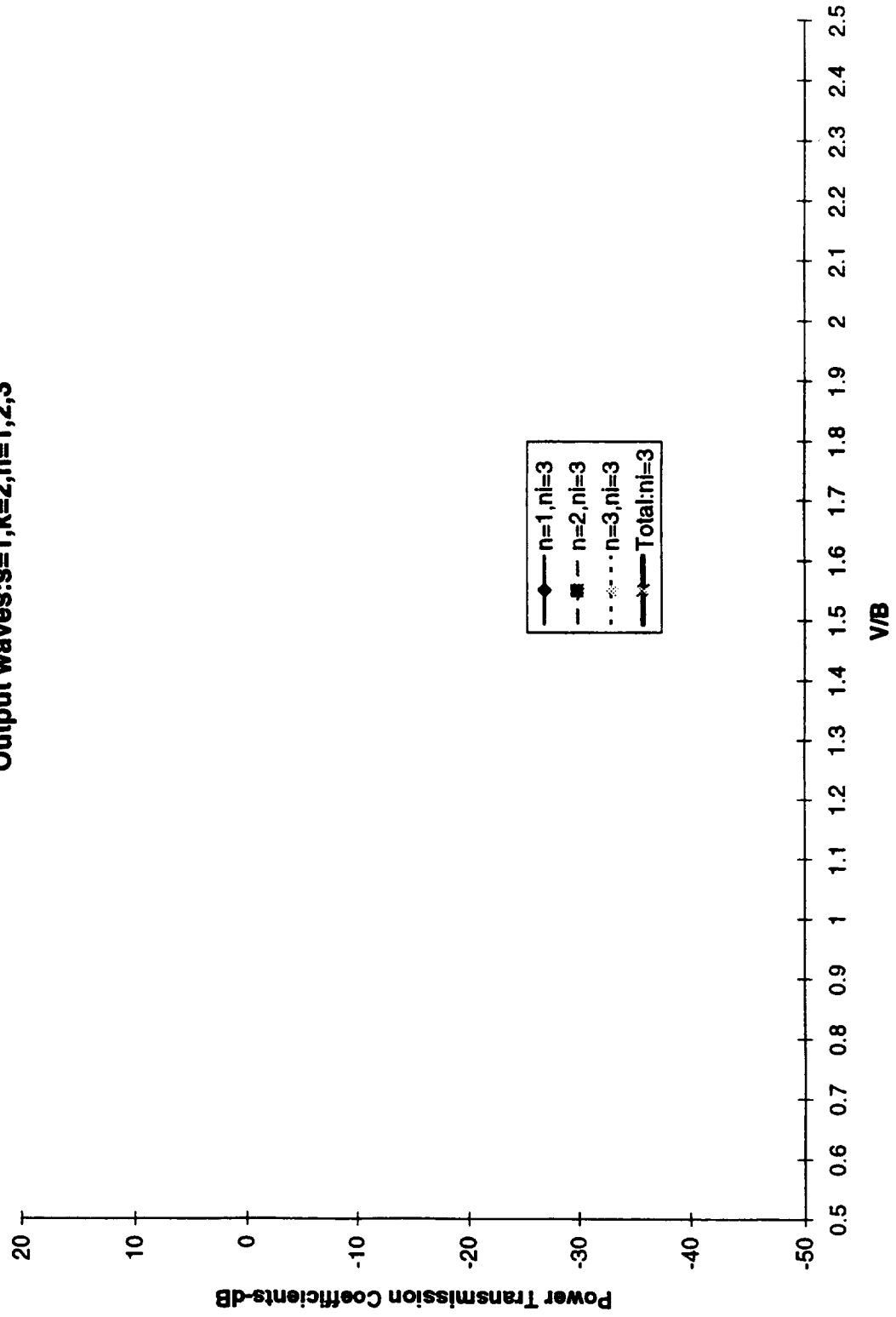
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=1, k_l=2, n_l=3$

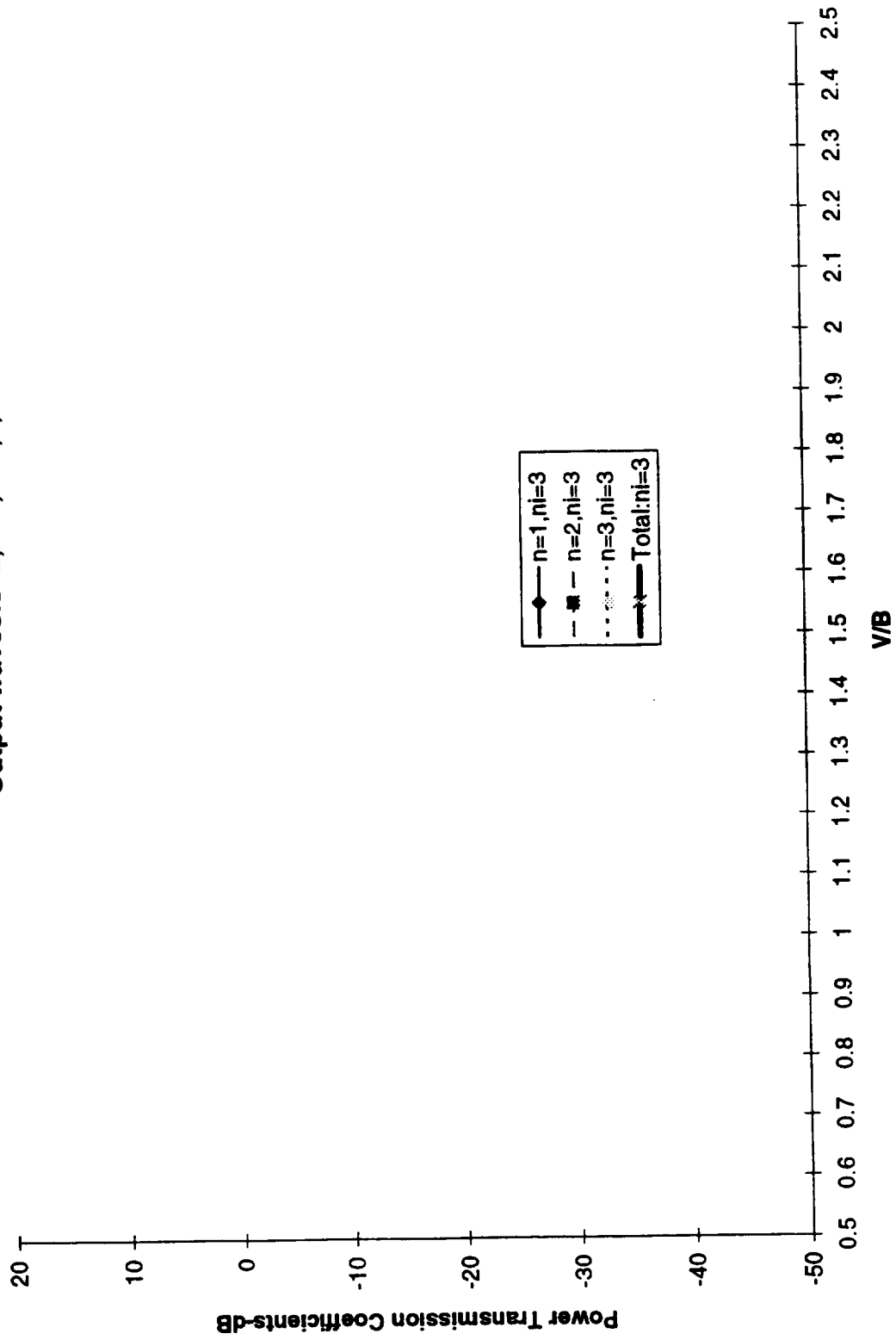
Output wave: $s=1, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=3$

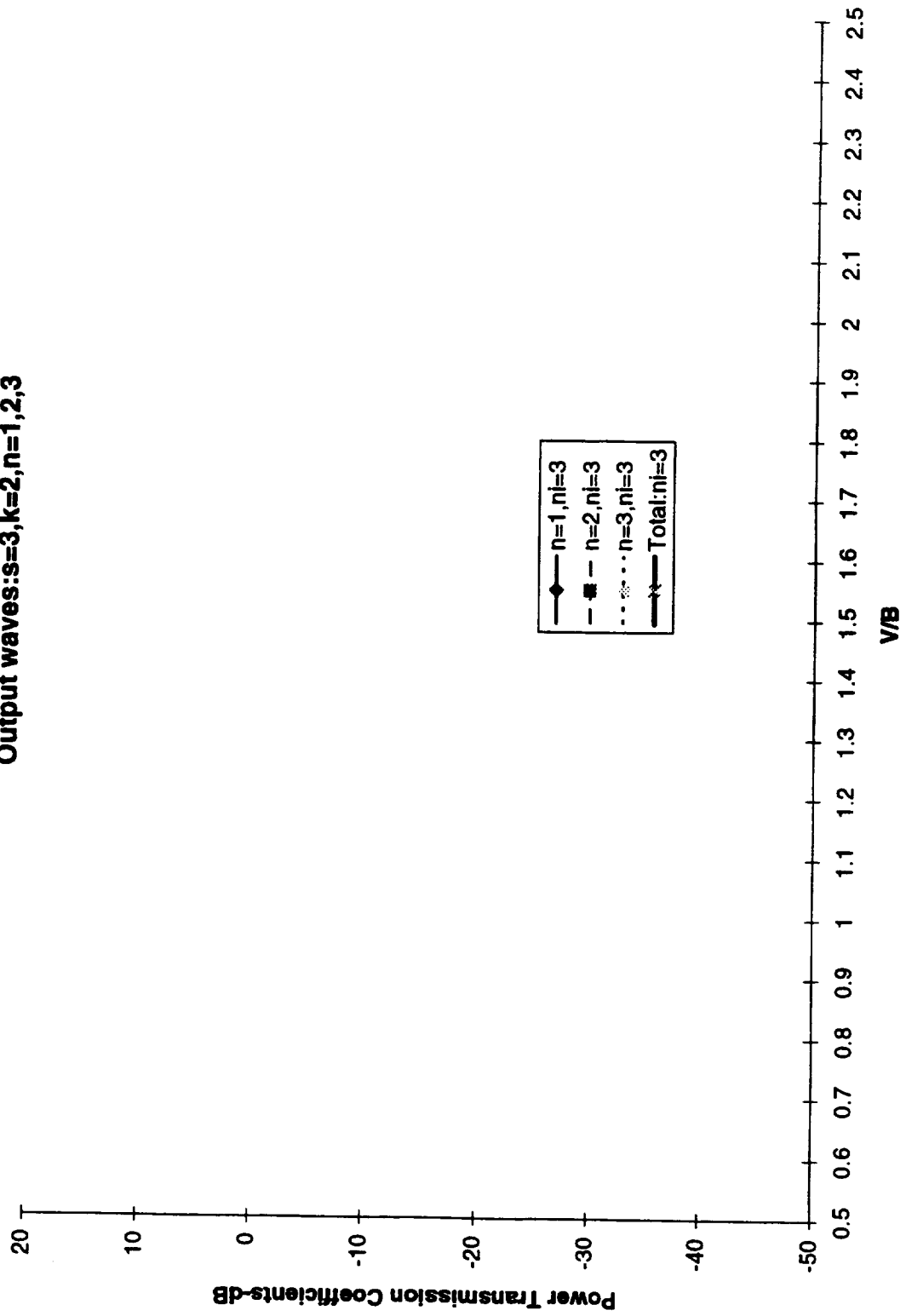
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=3$

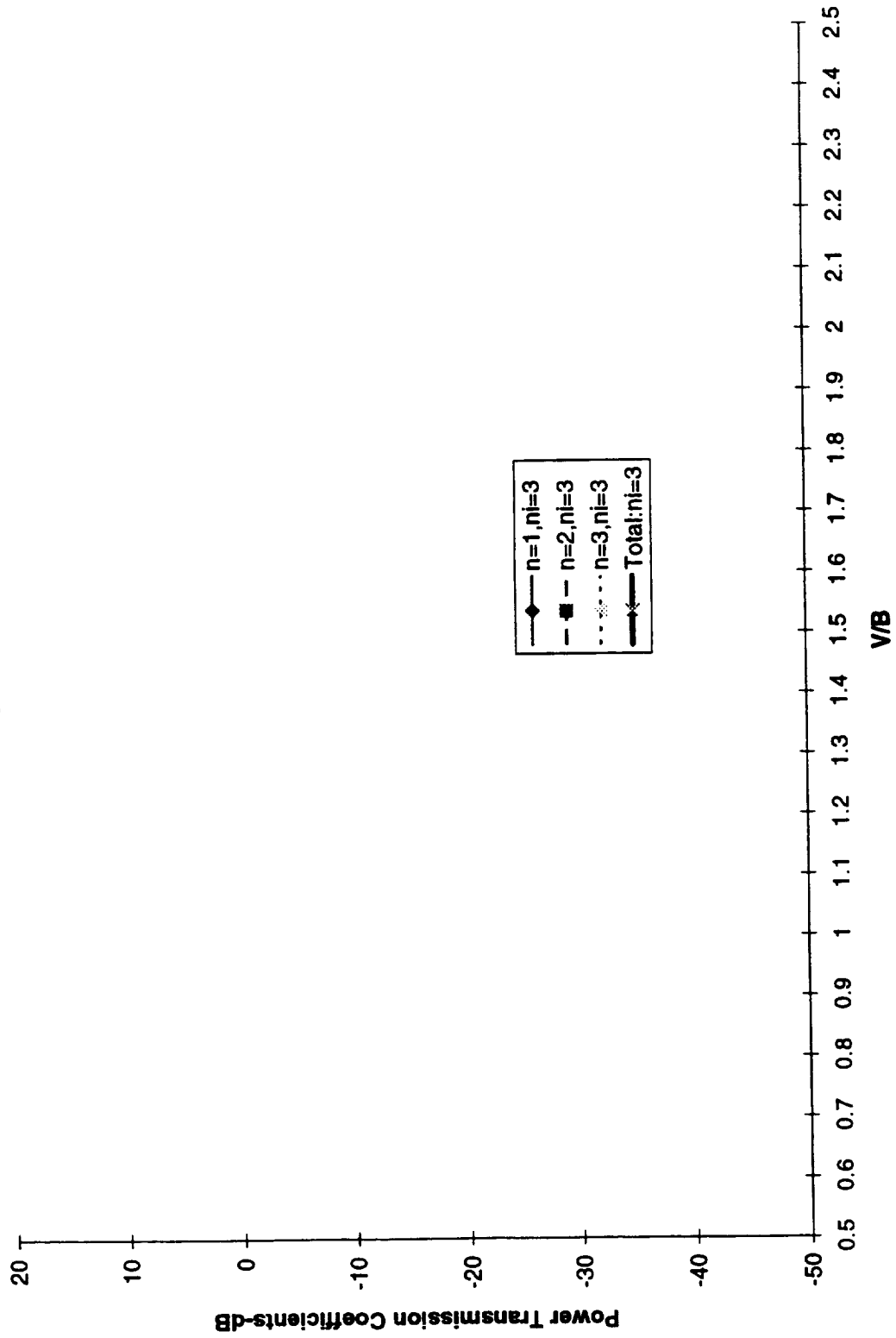
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=3$

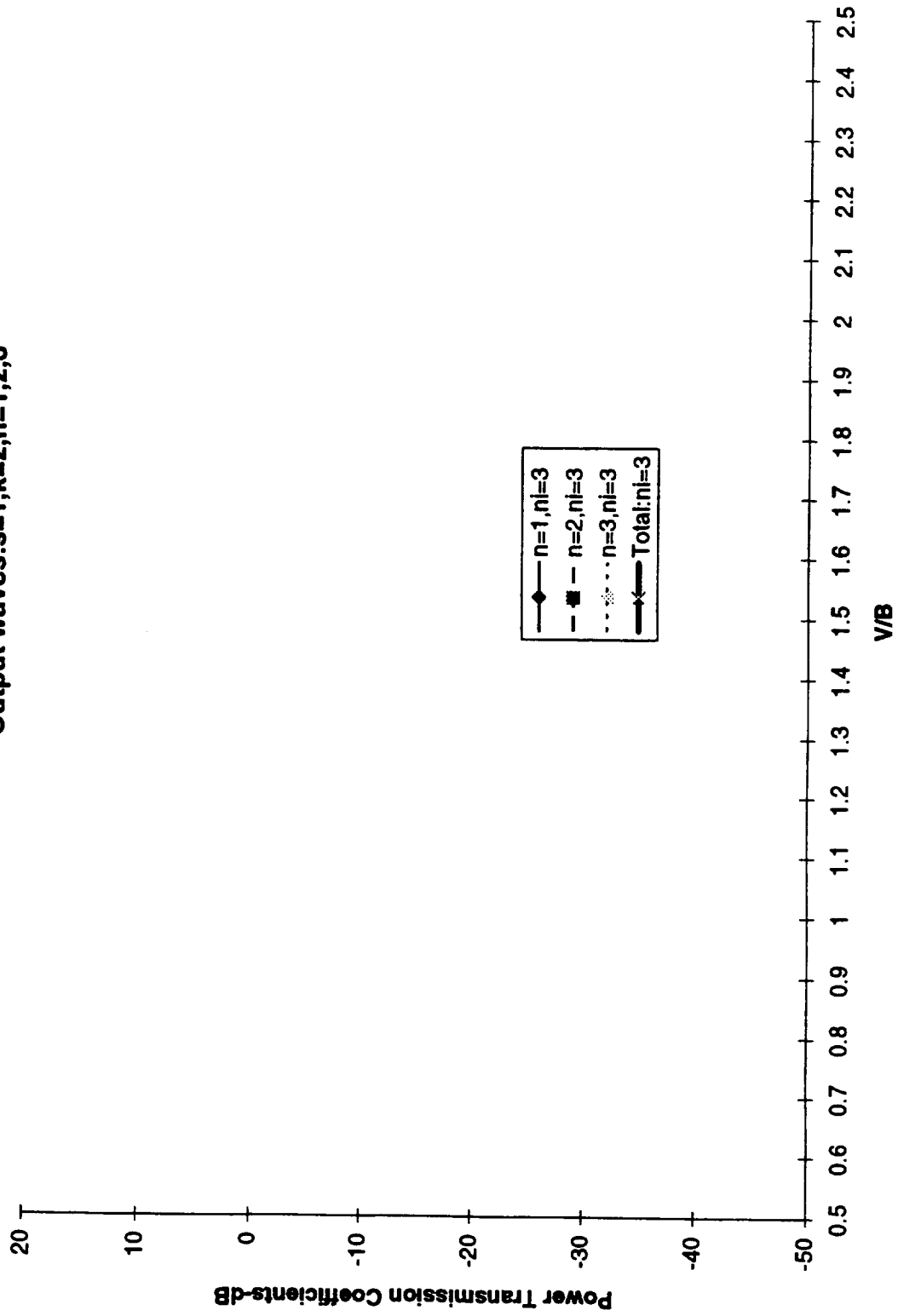
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=2, n_i=3$

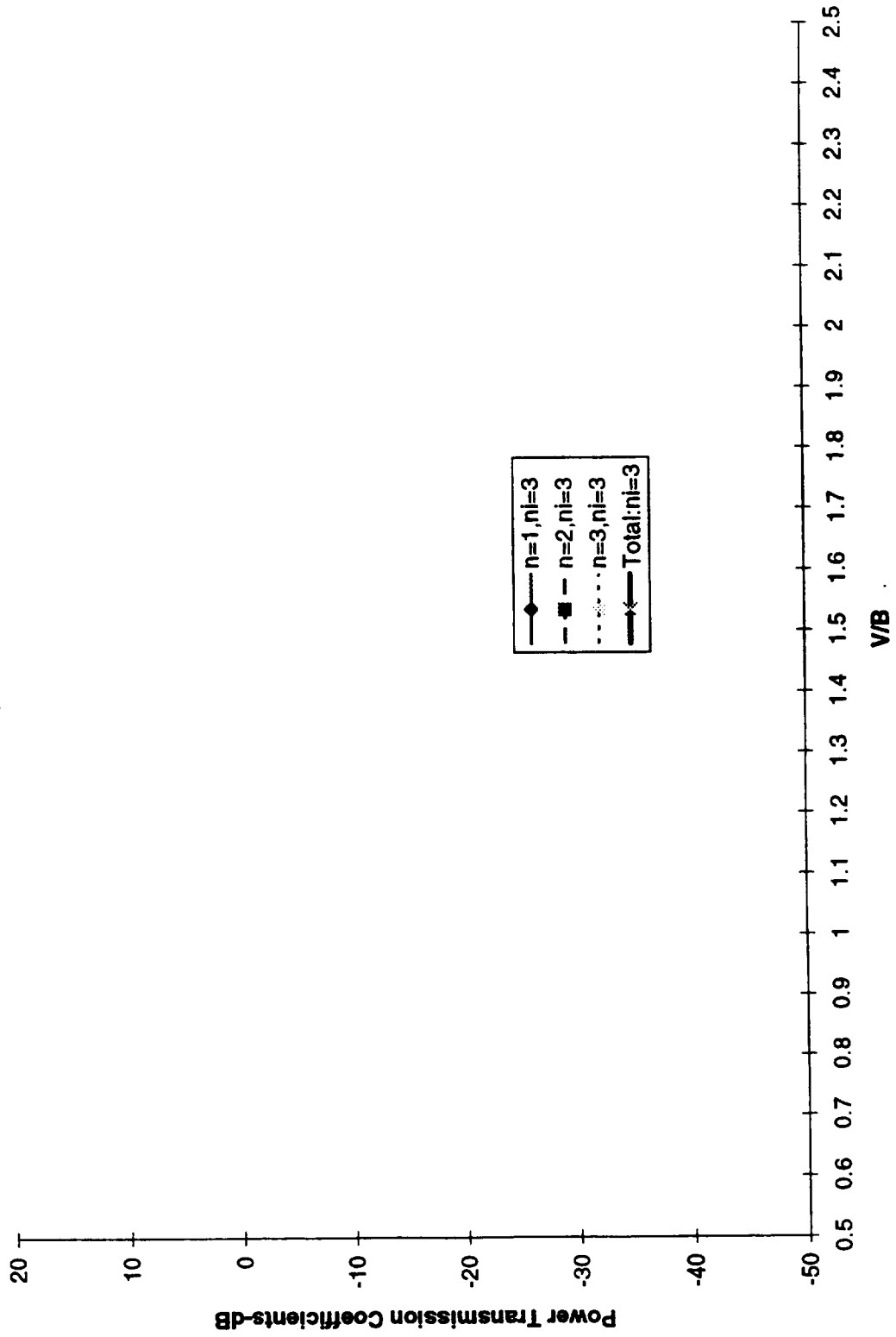
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_l=1, k_l=2, n_l=3$

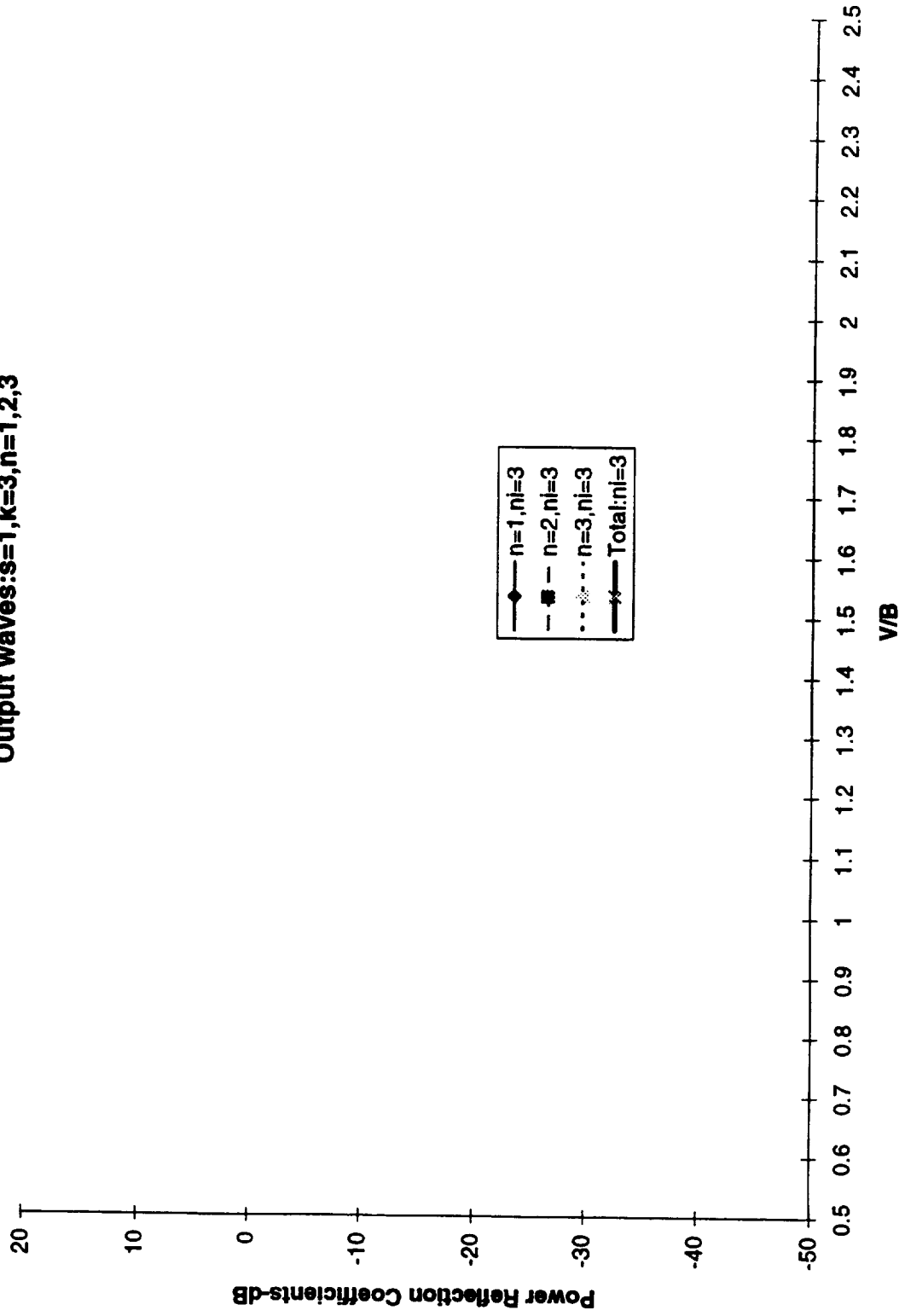
Output wave: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

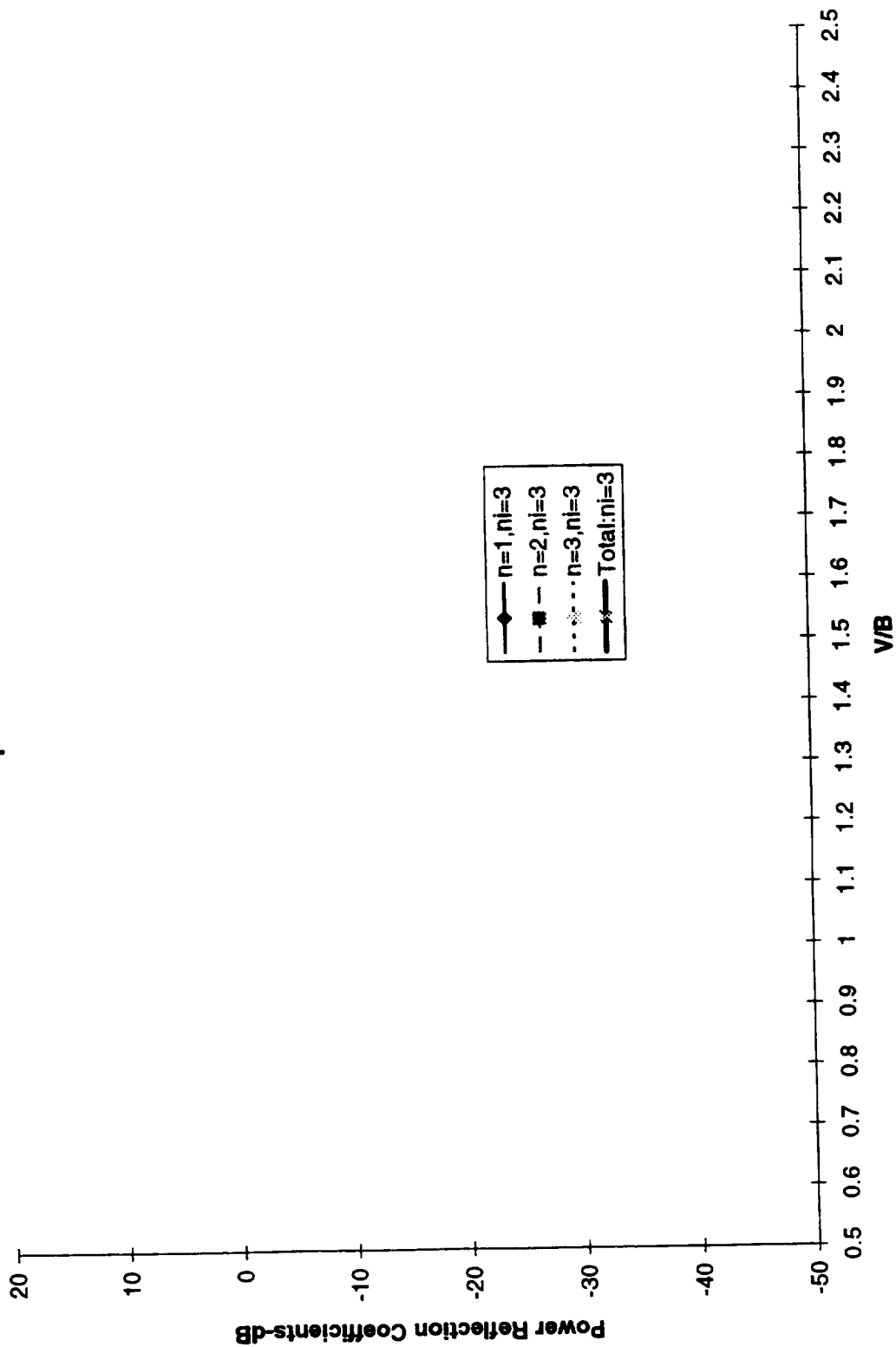
Output wave: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

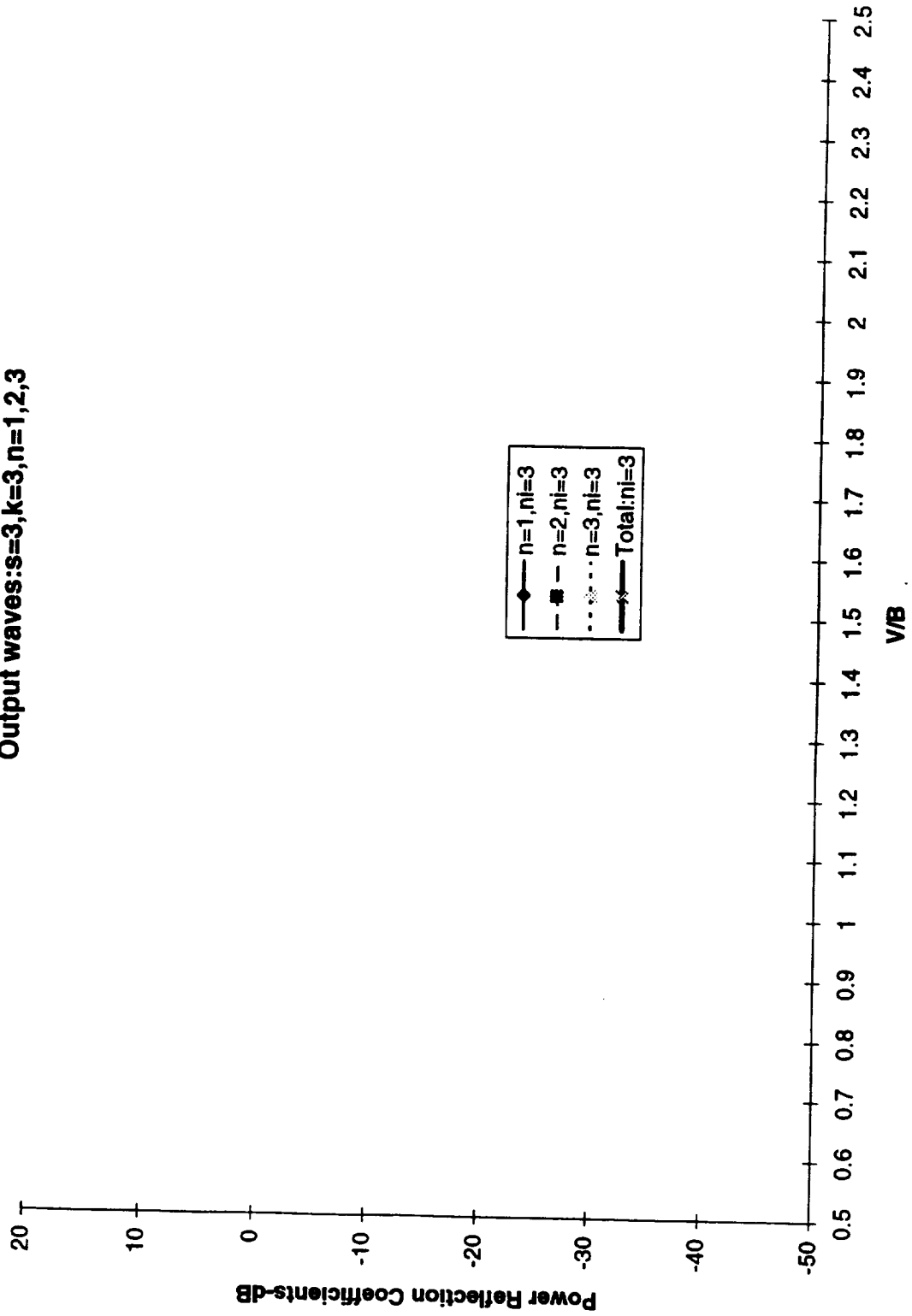
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

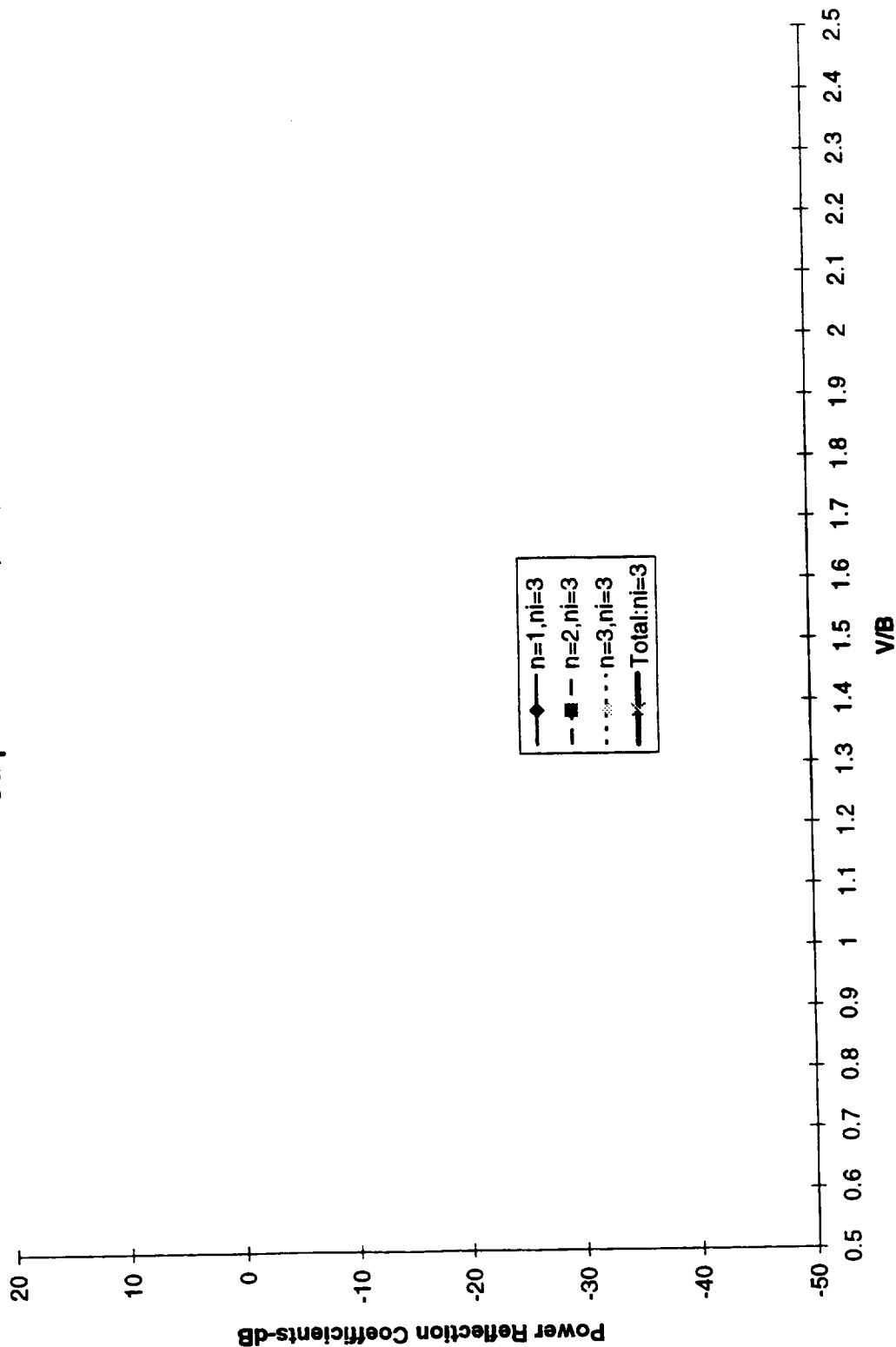
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-Mld Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

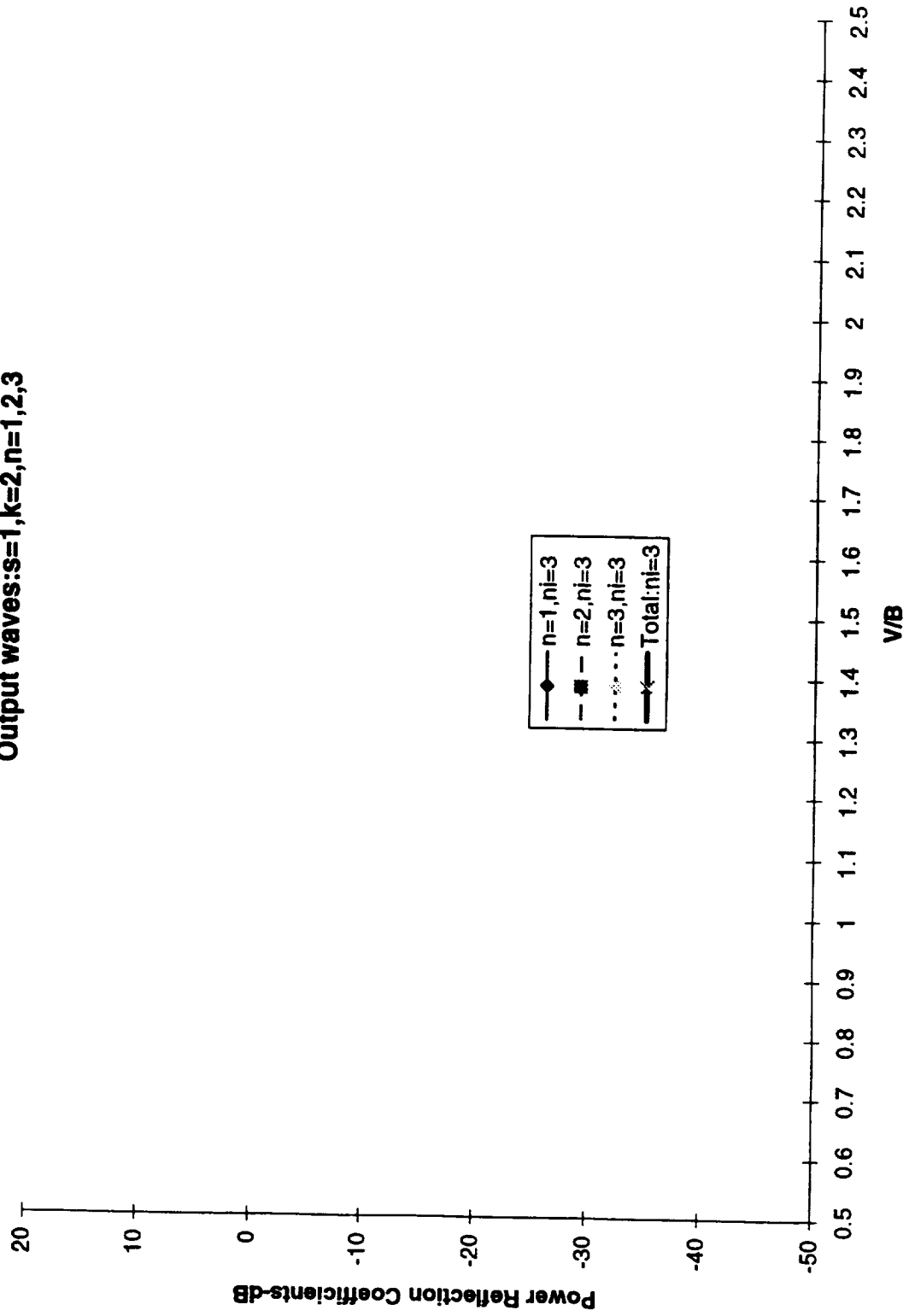
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_l=1, k_l=3, n_l=3$

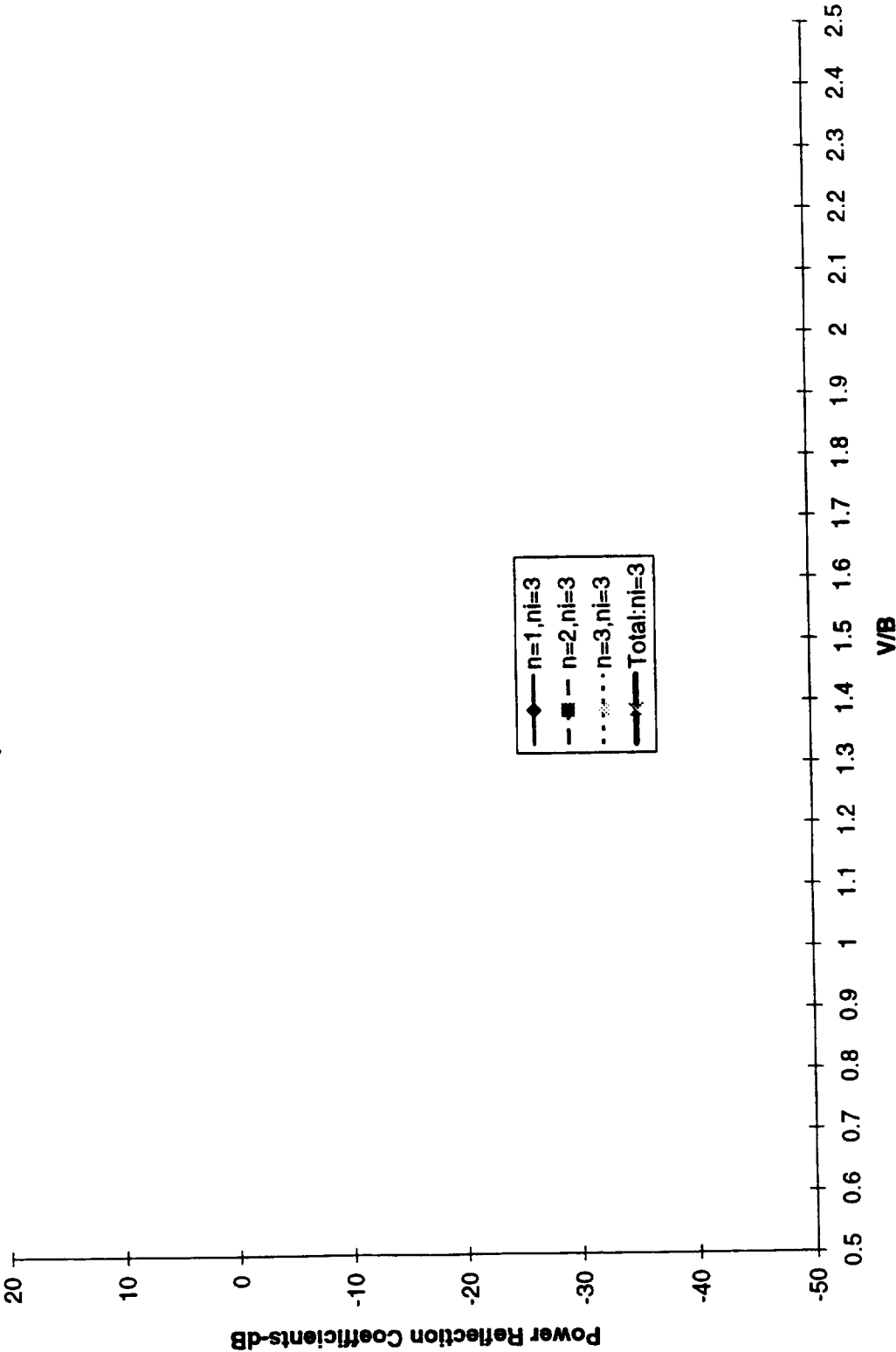
Output wave: $s=1, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

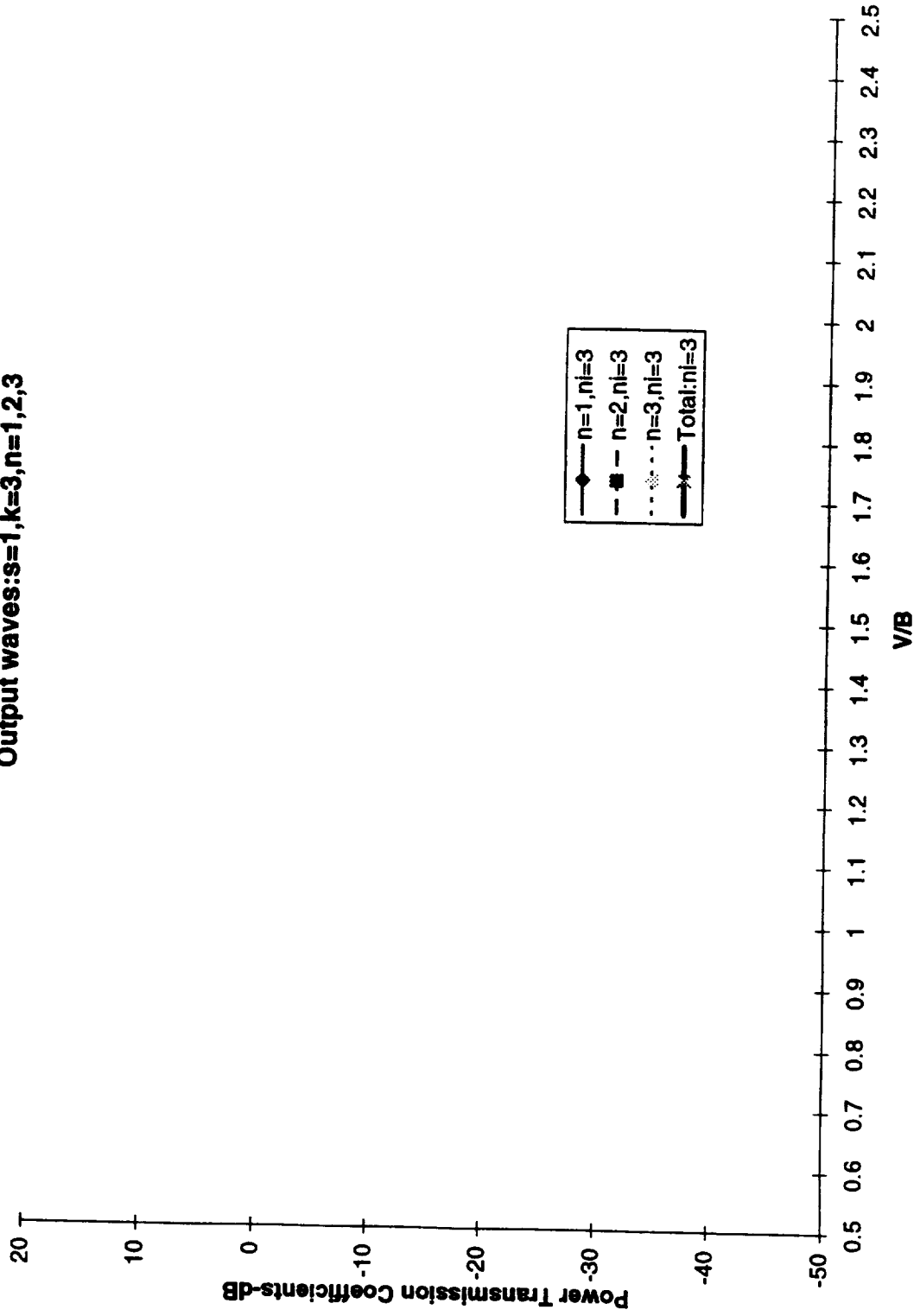
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

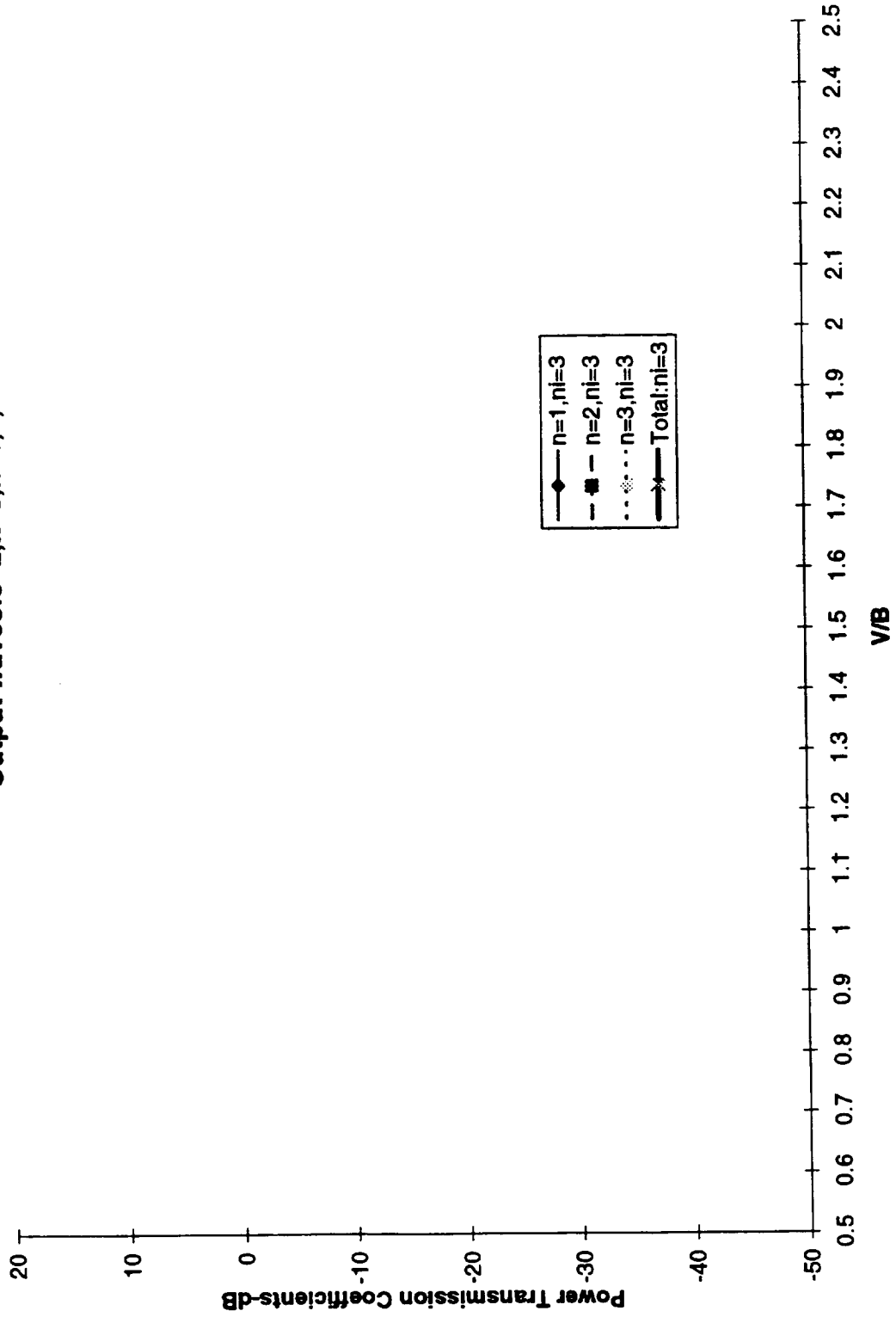
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

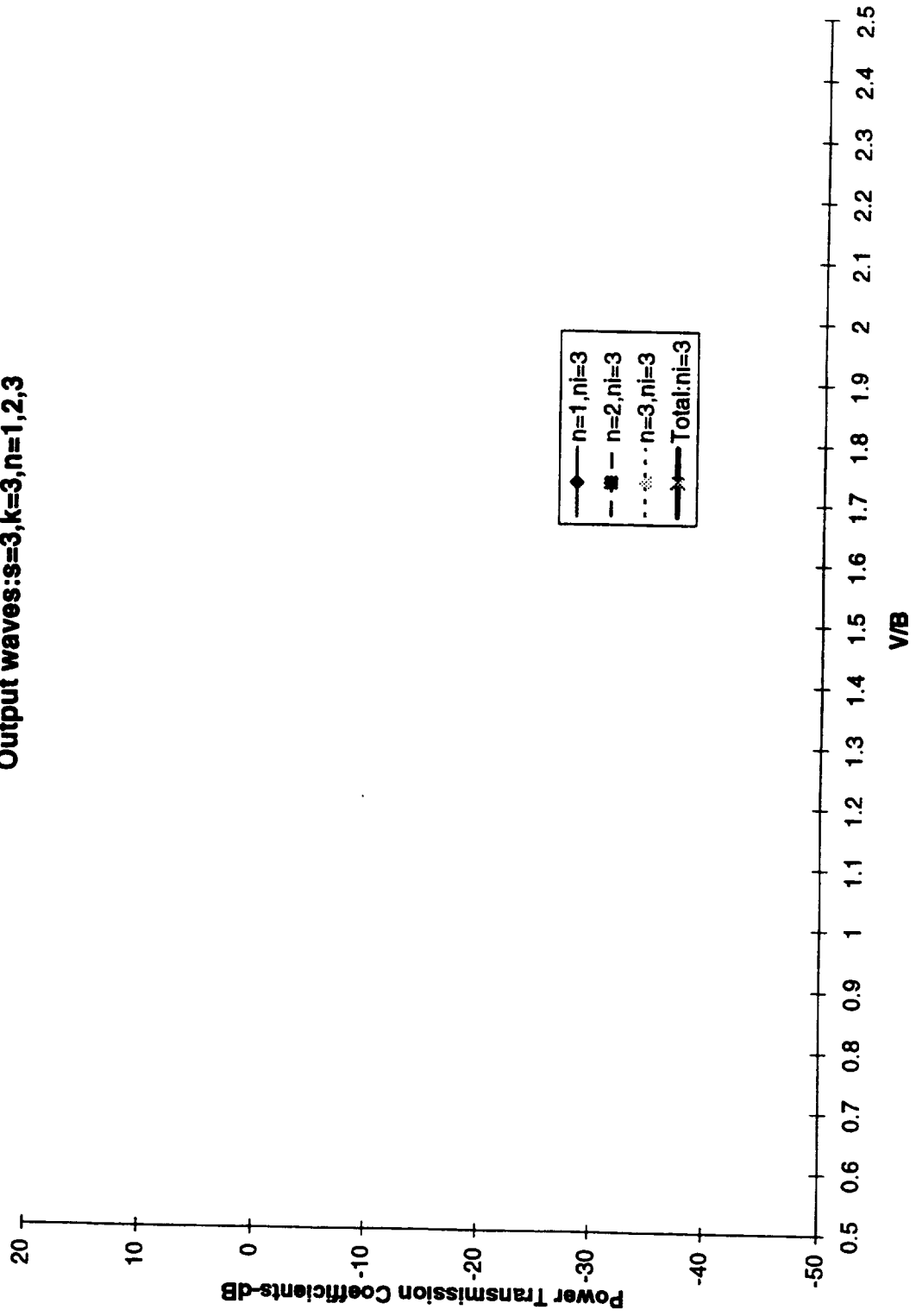
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

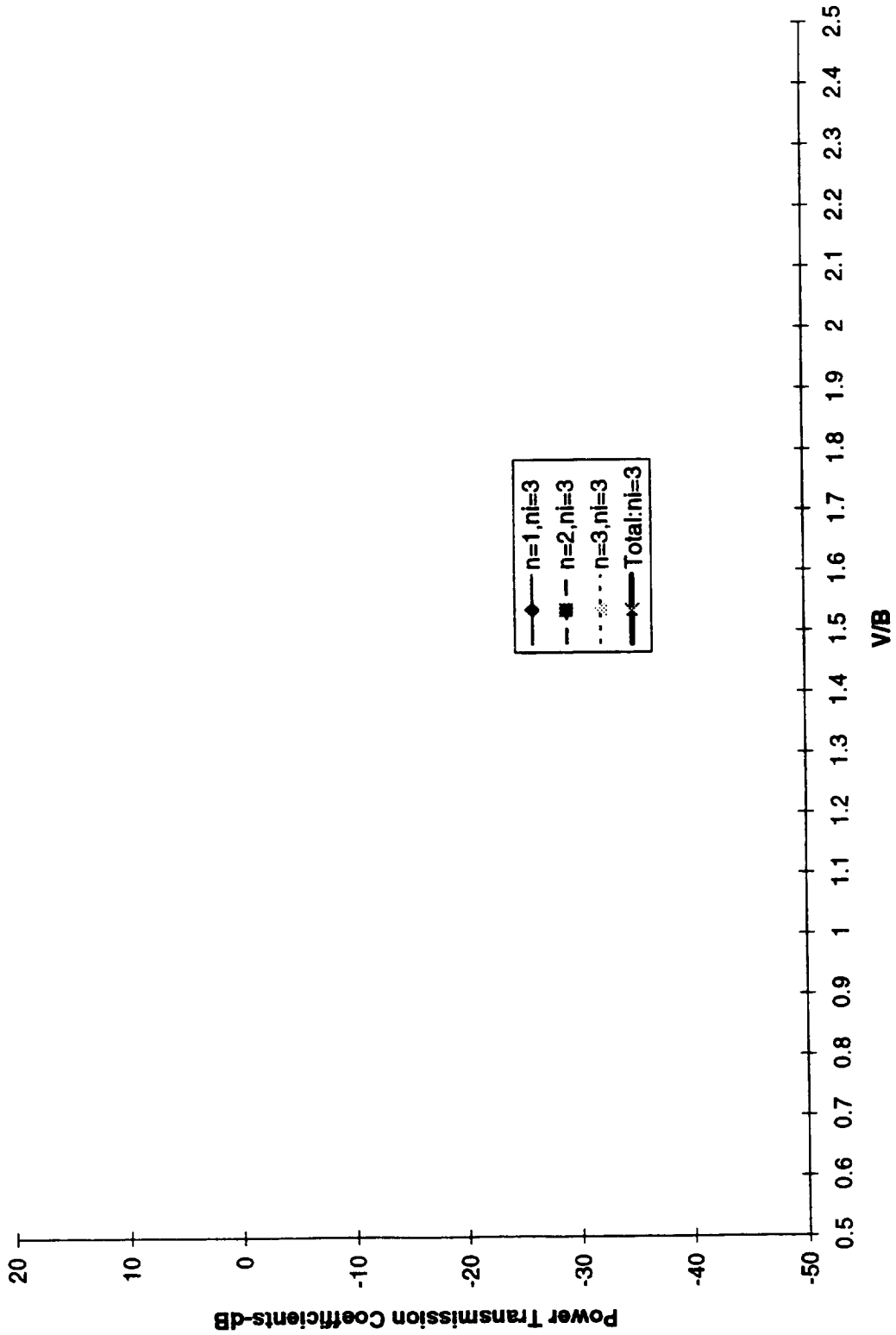
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

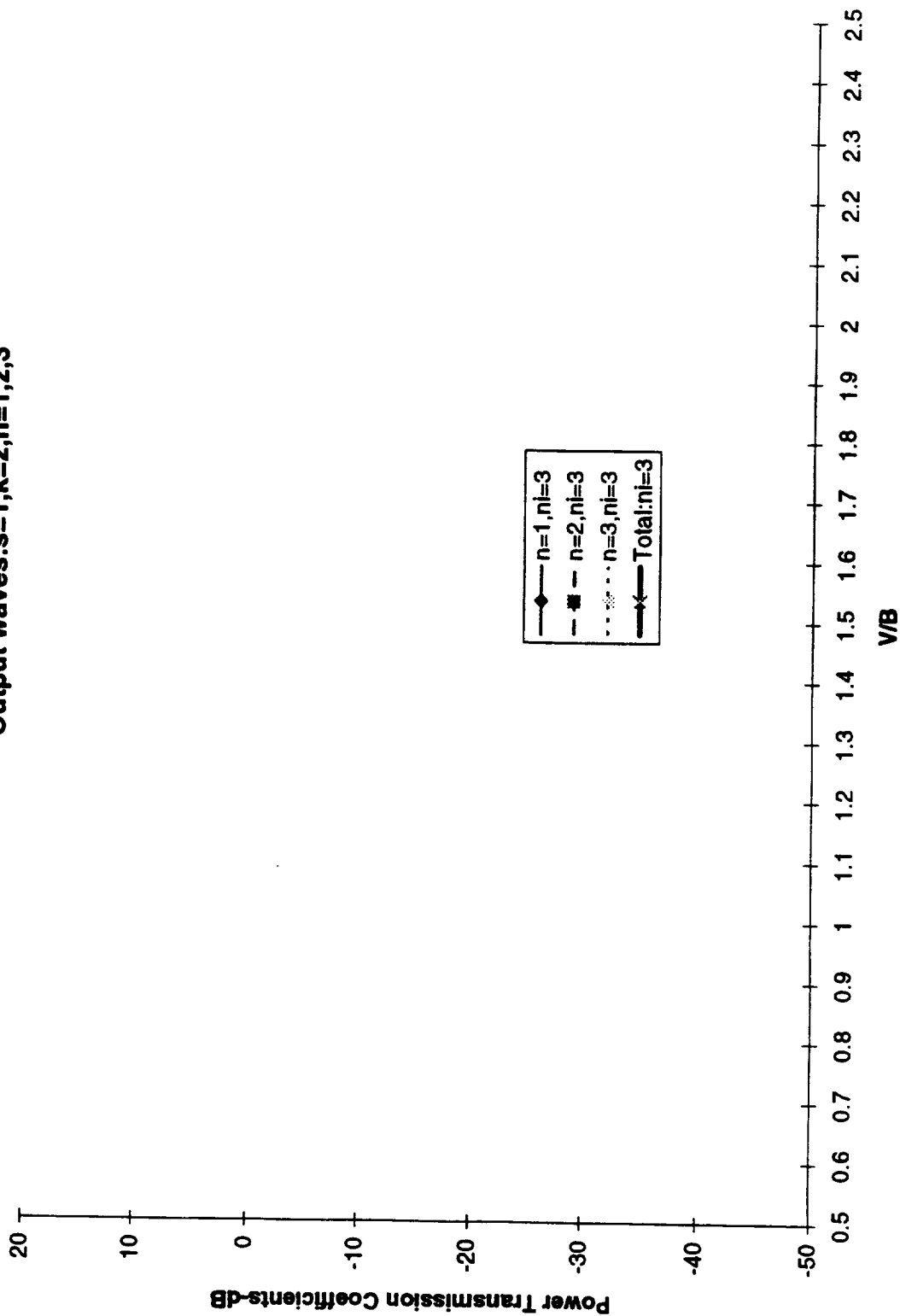
Output waves: $s=1, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

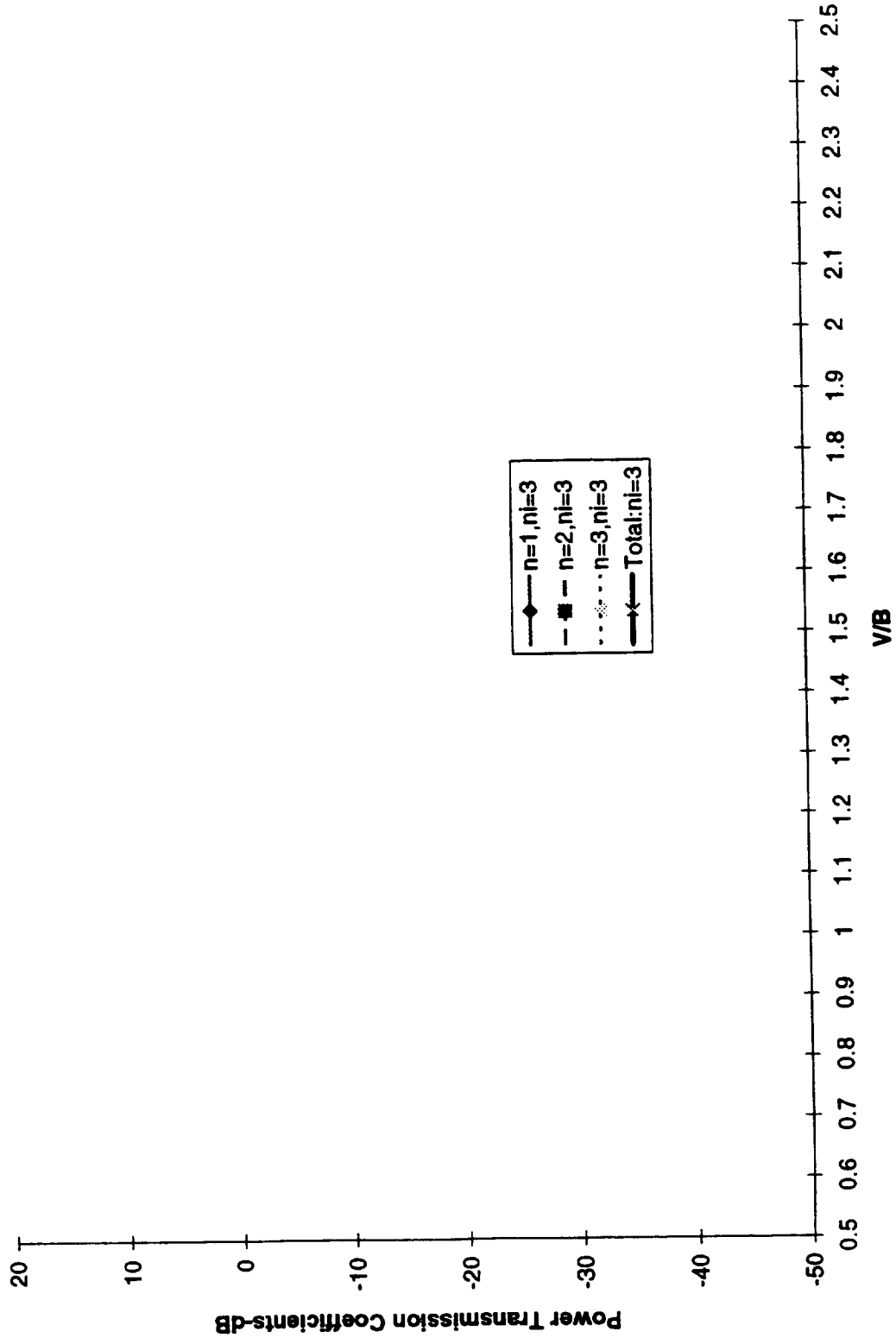
Output waves: $s=1, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=1, k_i=3, n_i=3$

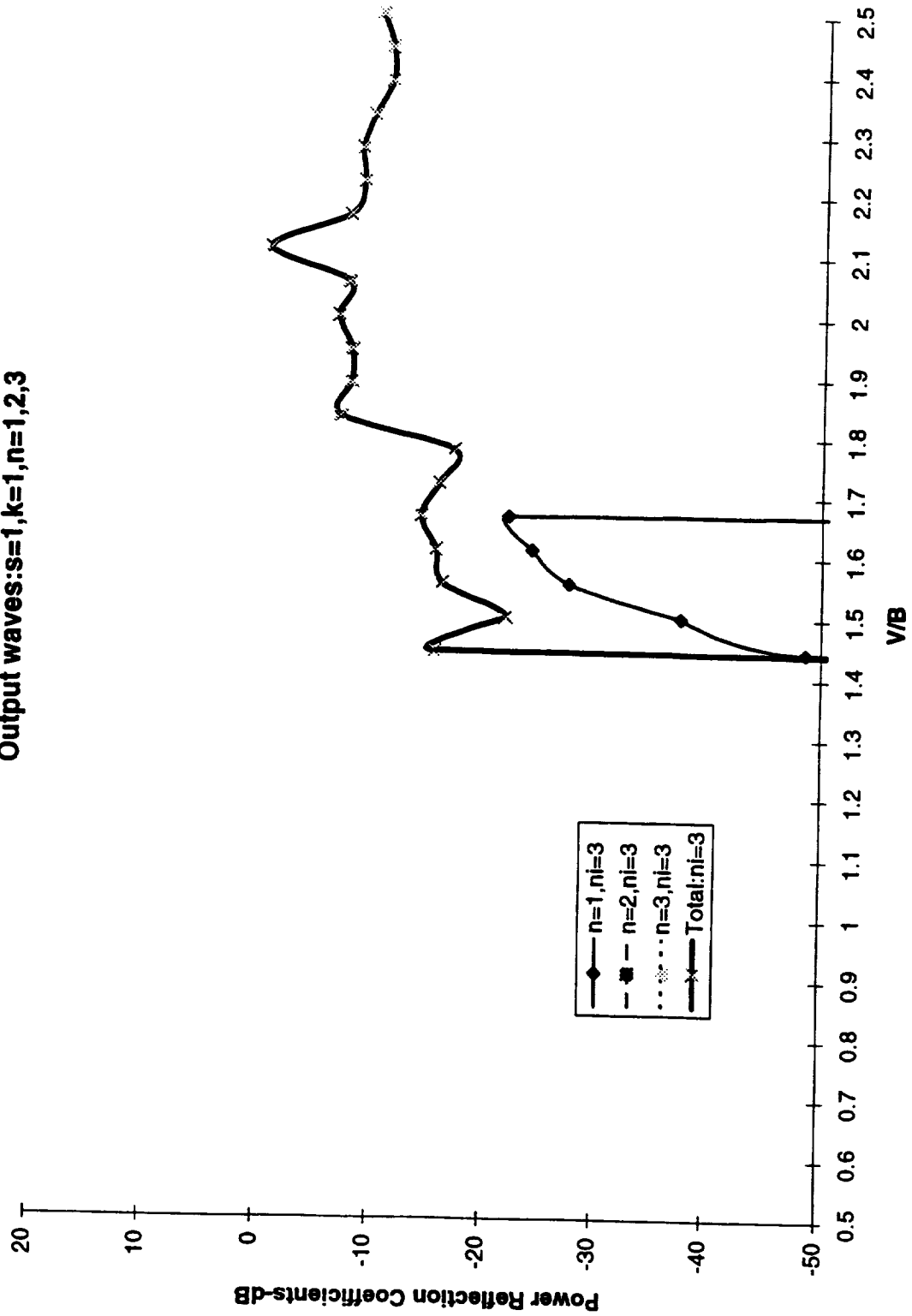
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

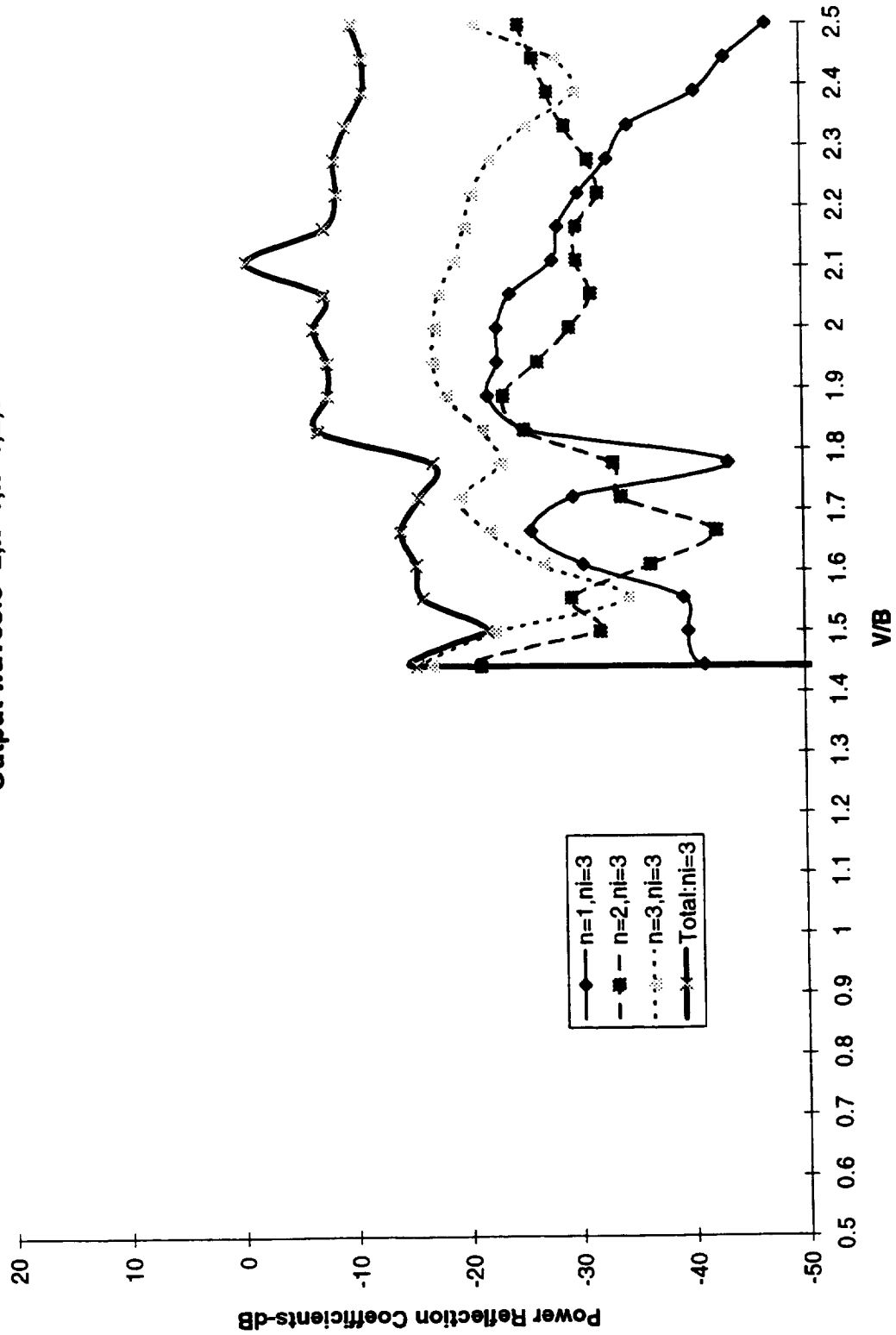
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=2, k_l=1, n_l=3$

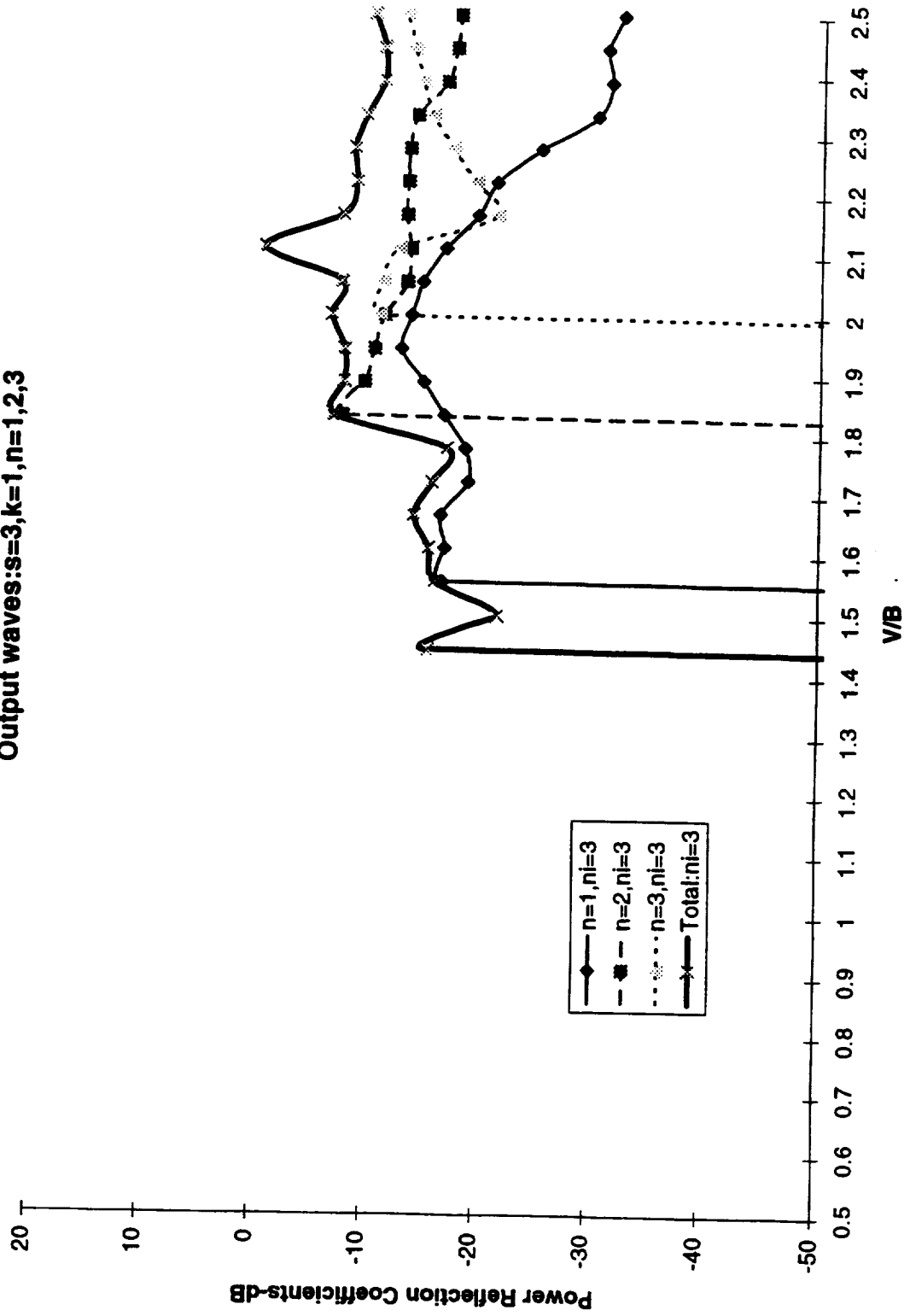
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=2, k_l=1, n_l=3$

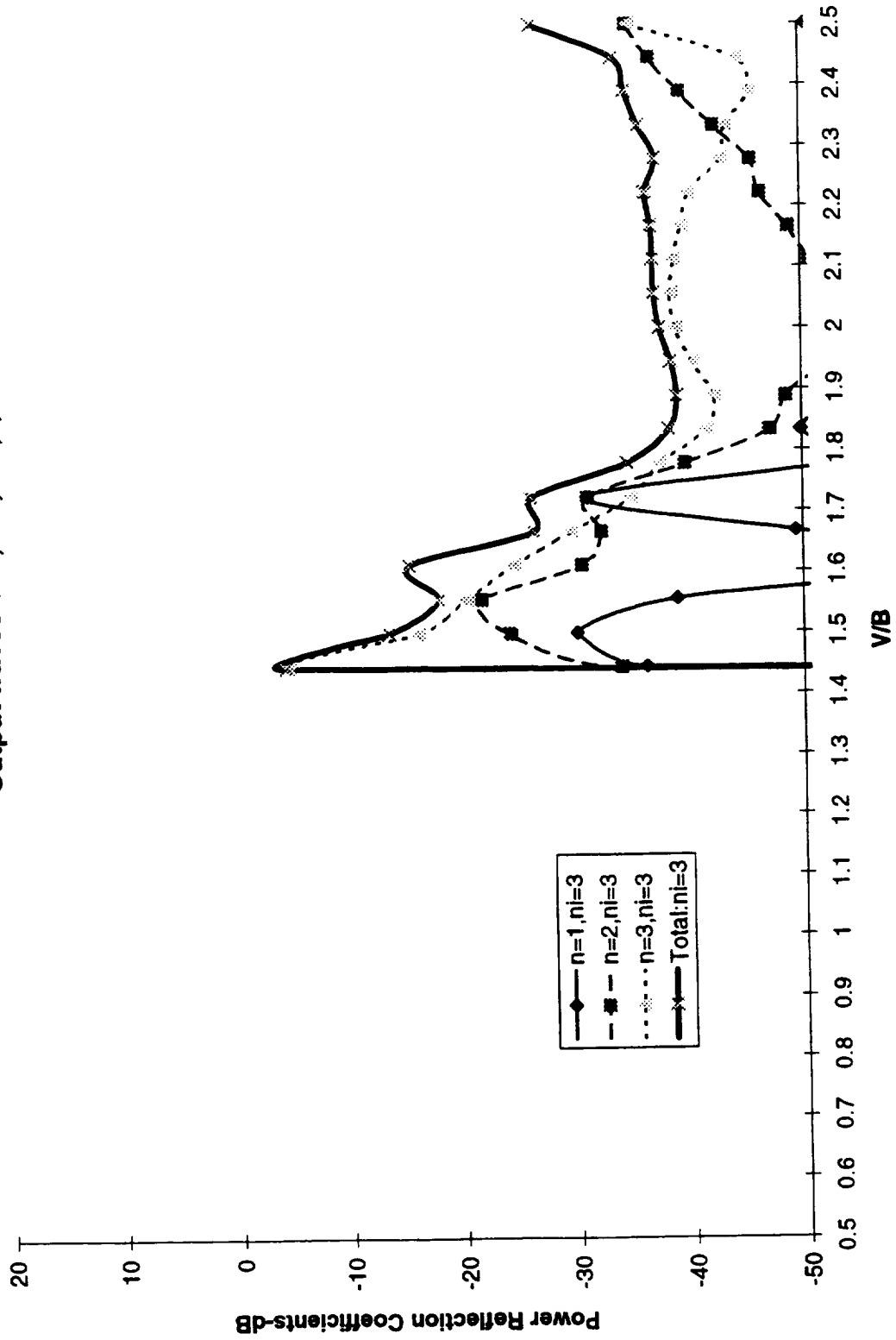
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

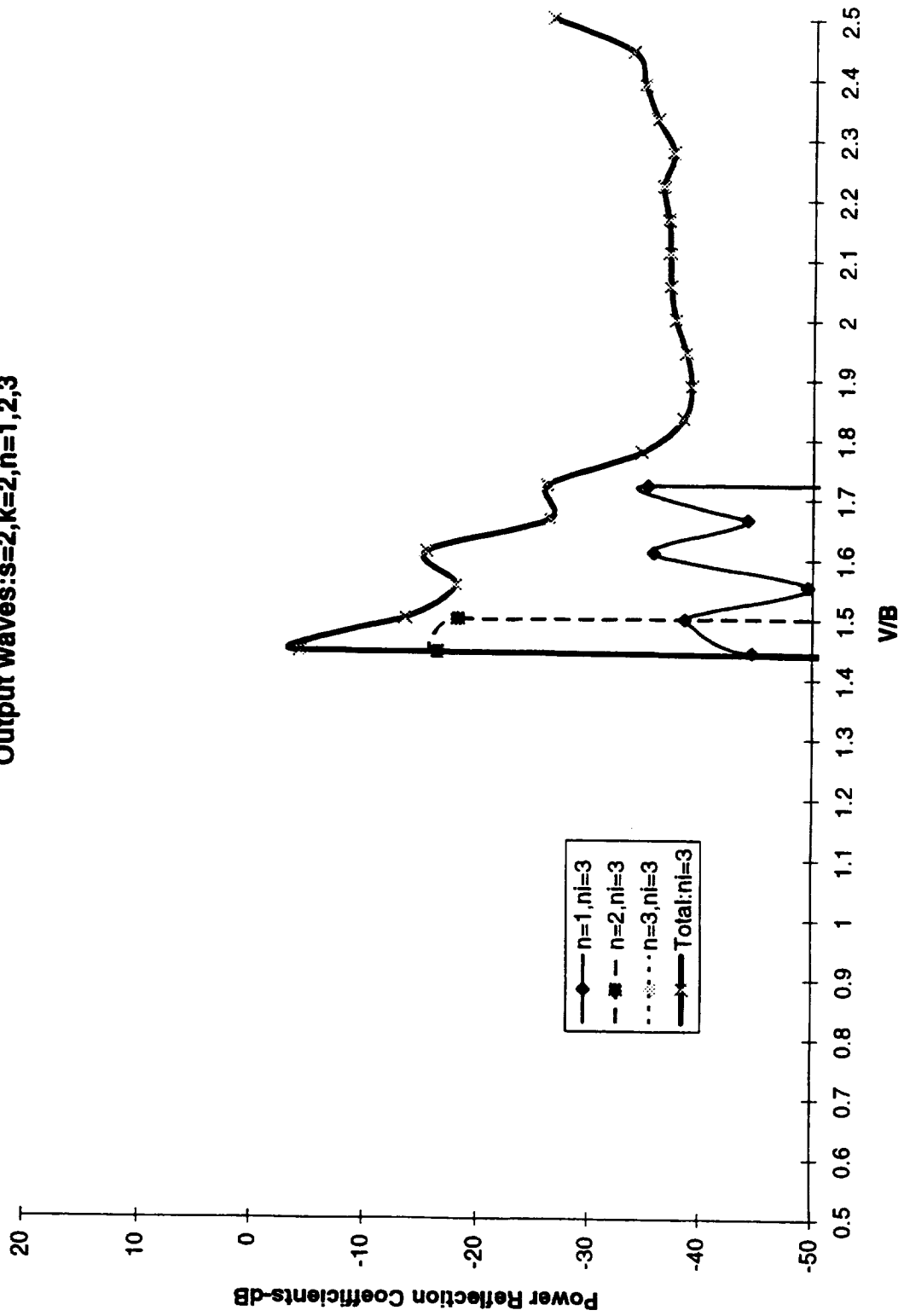
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_l=2, k_l=1, n_l=3$

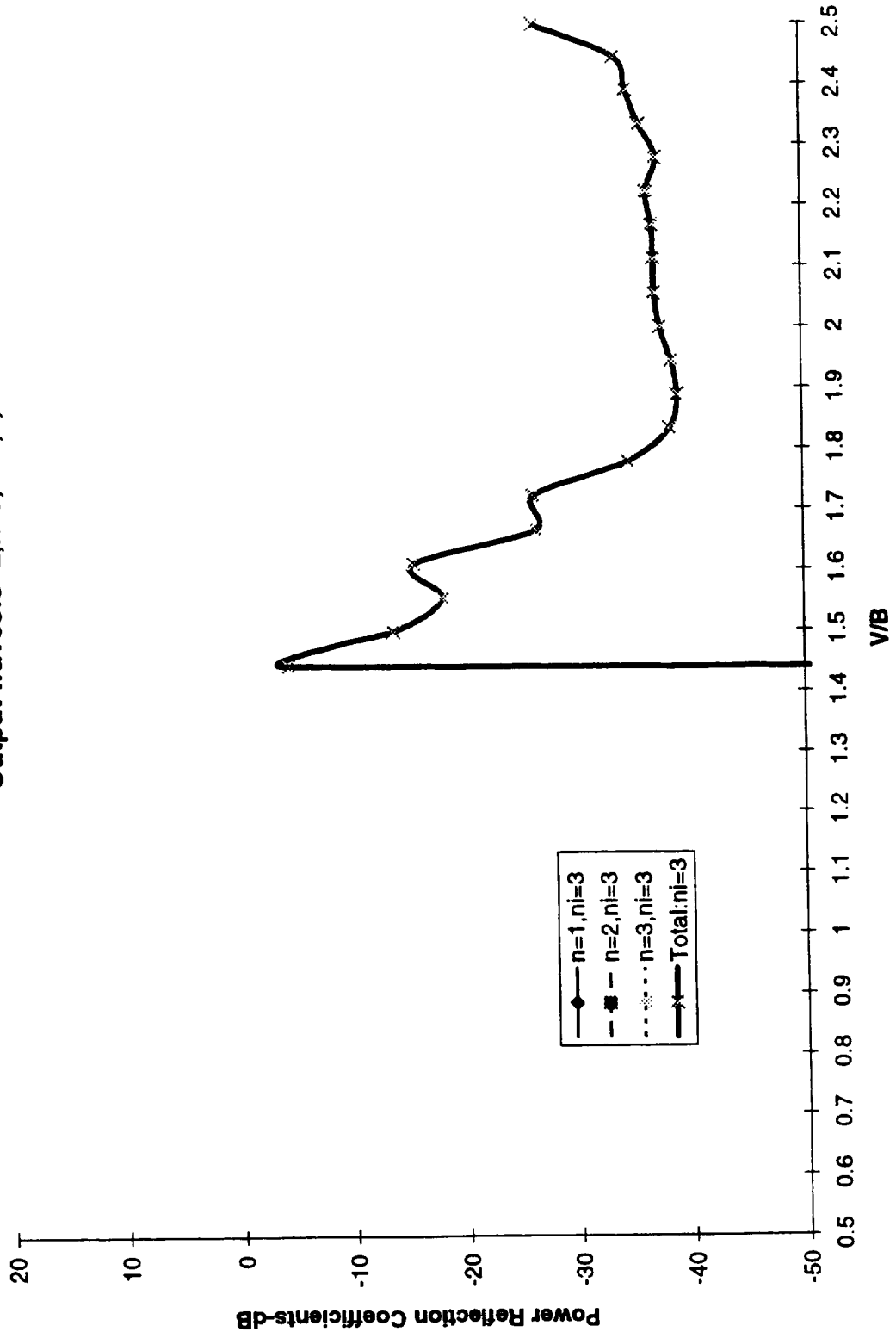
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

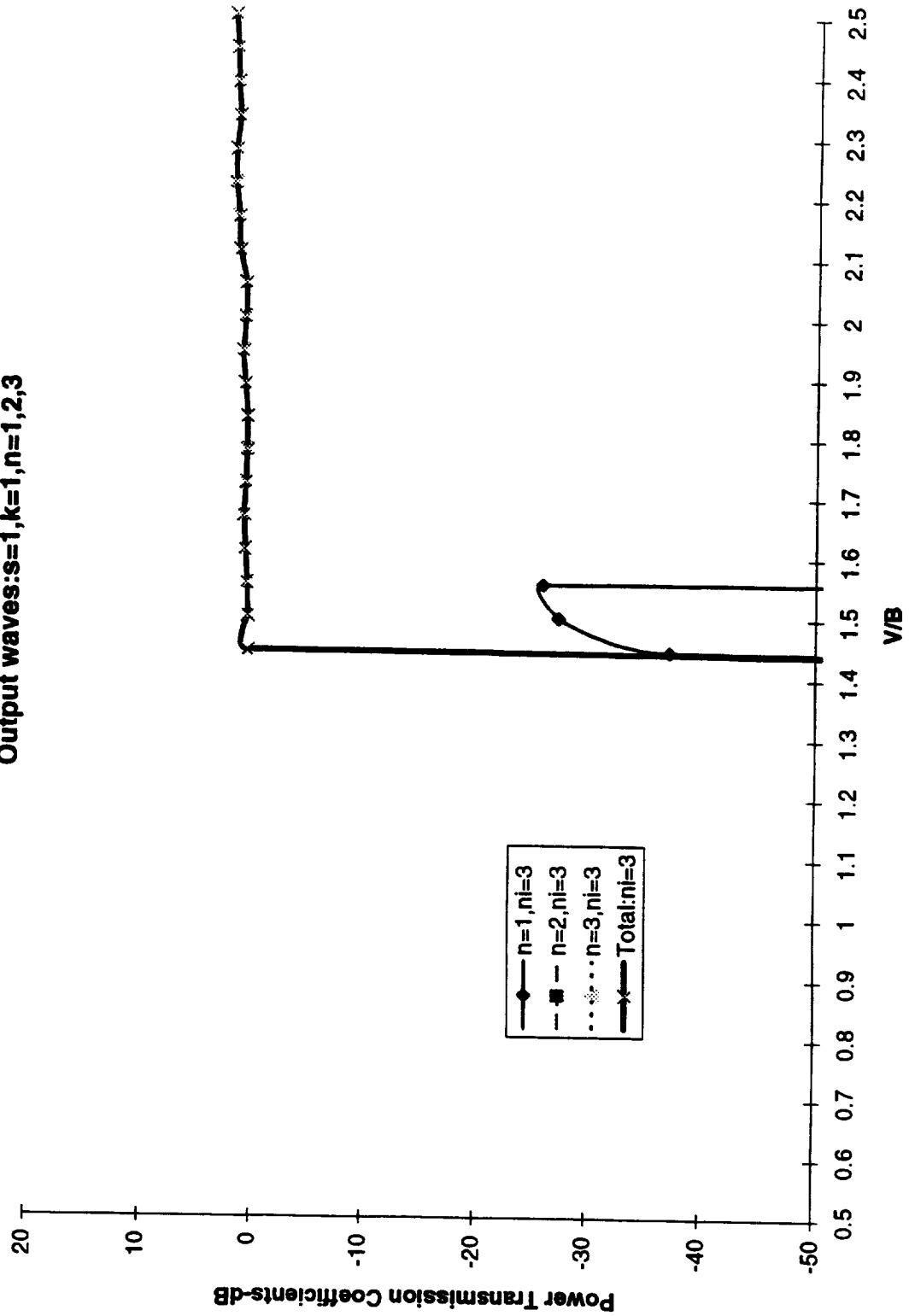
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

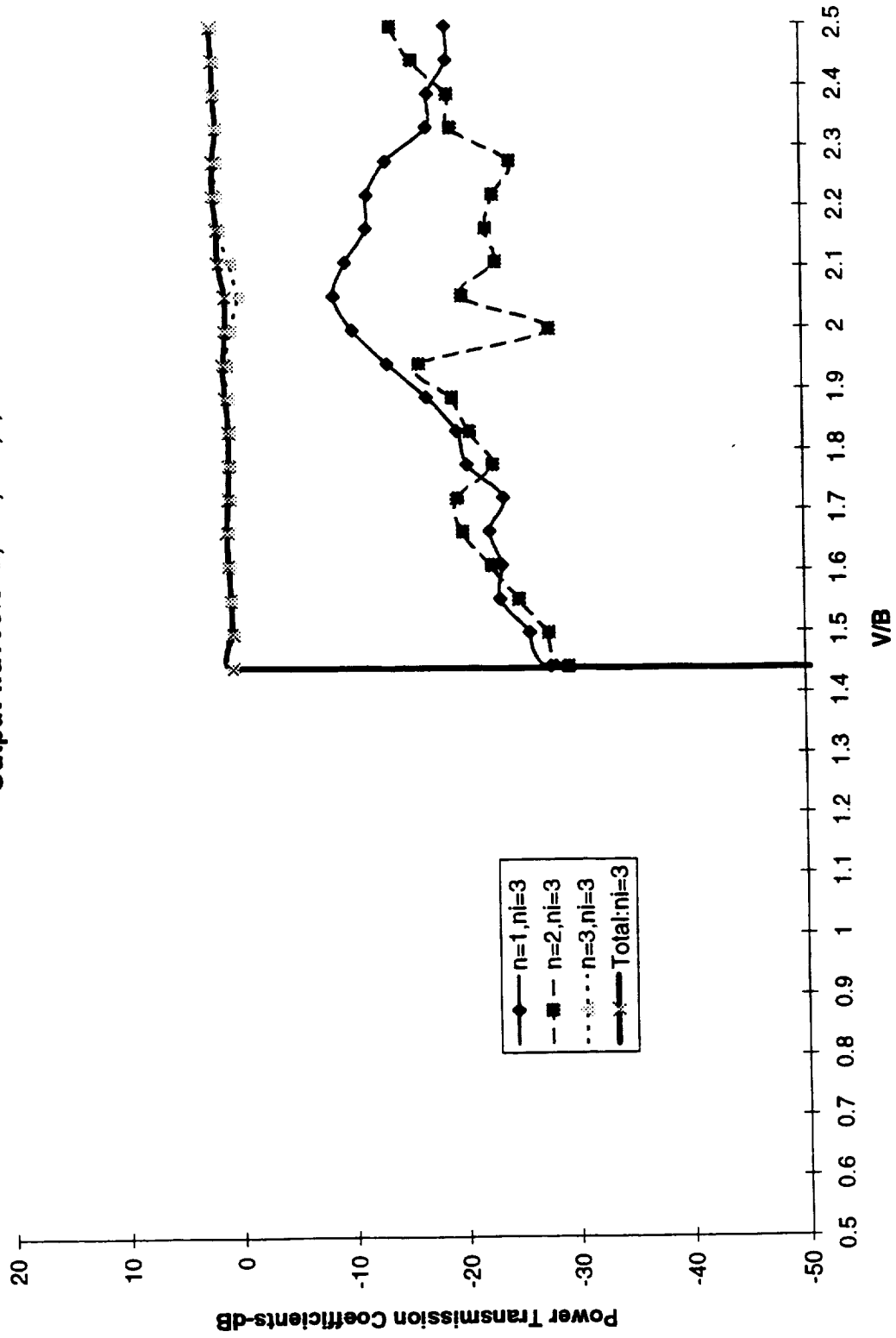
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

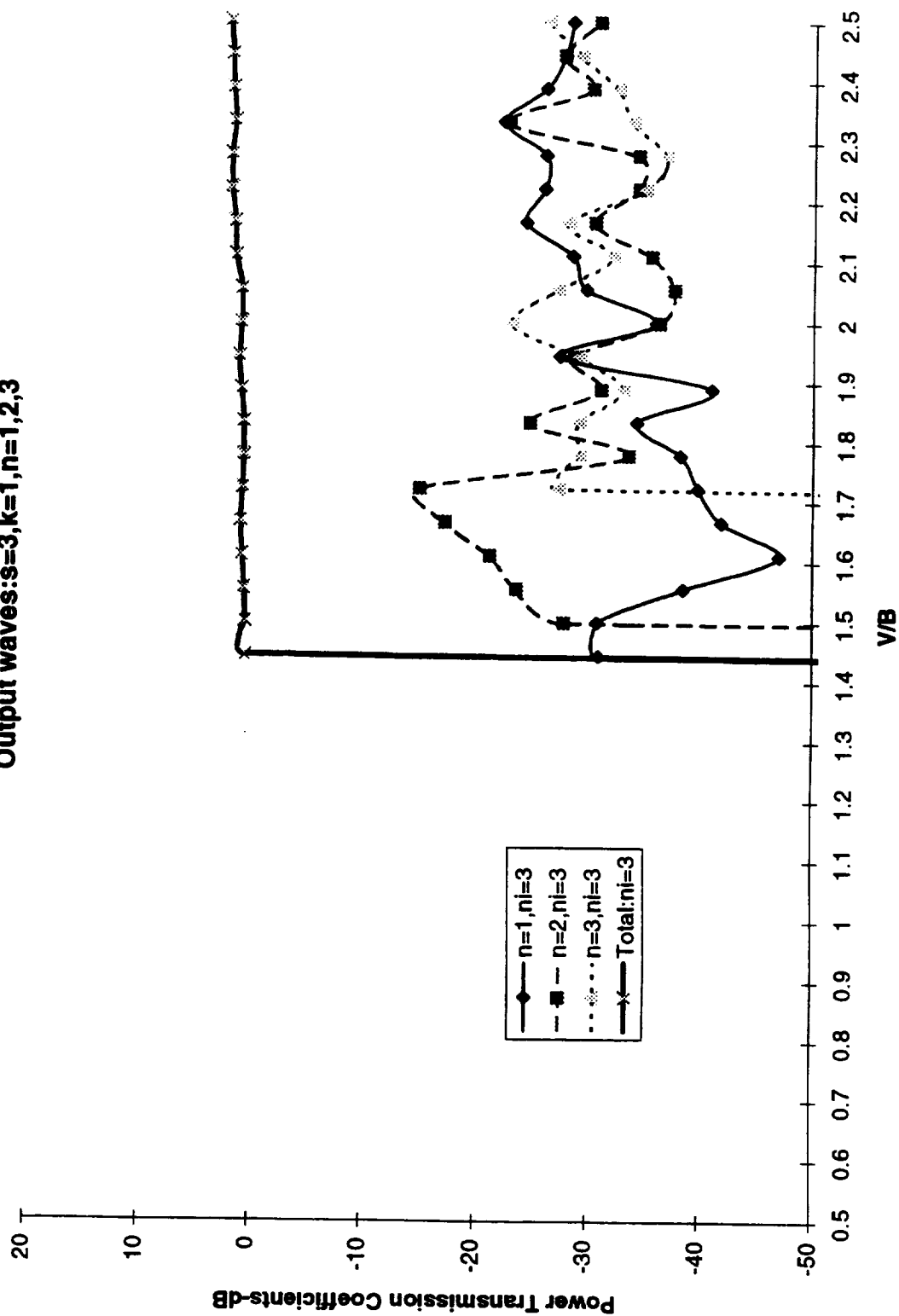
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

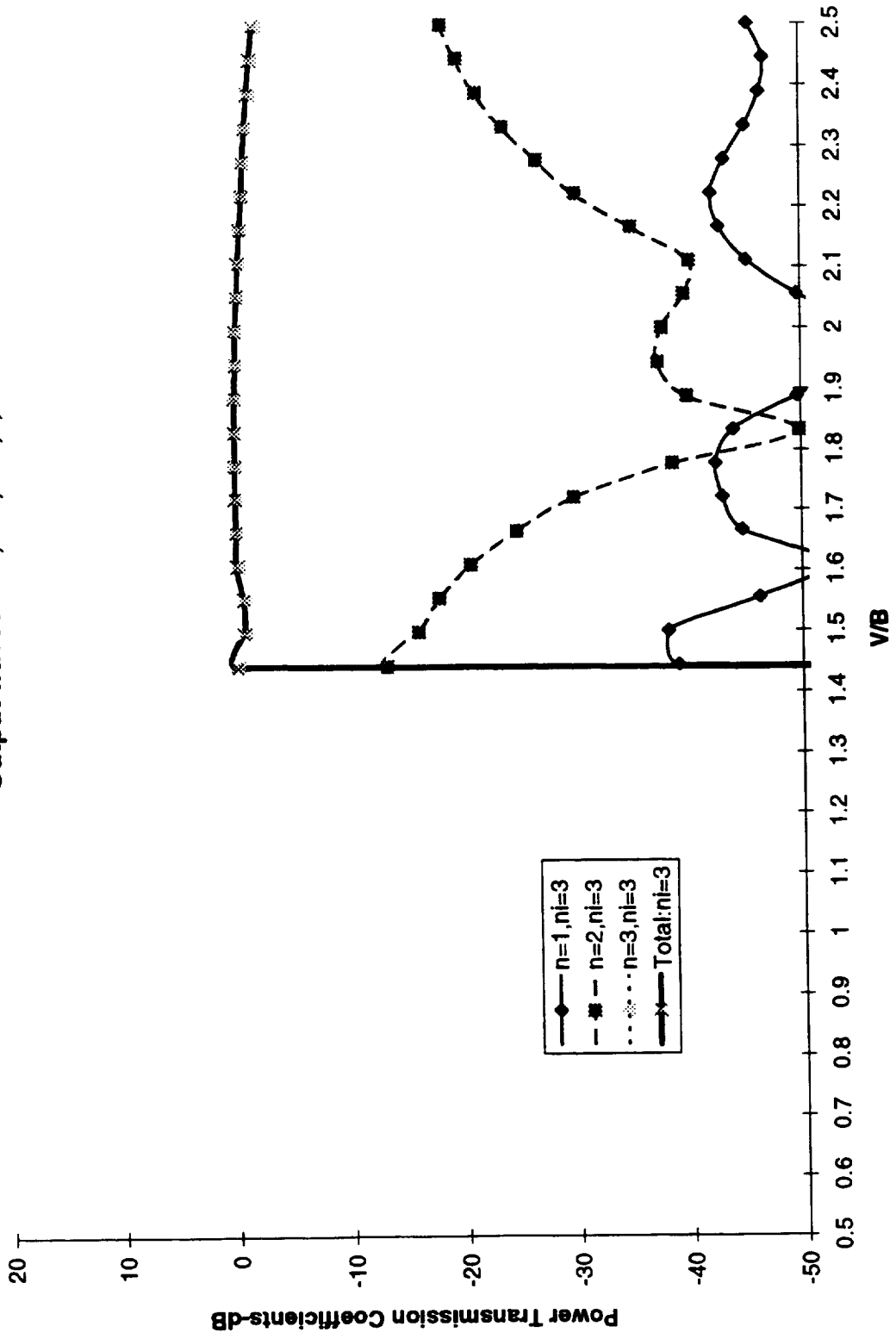
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

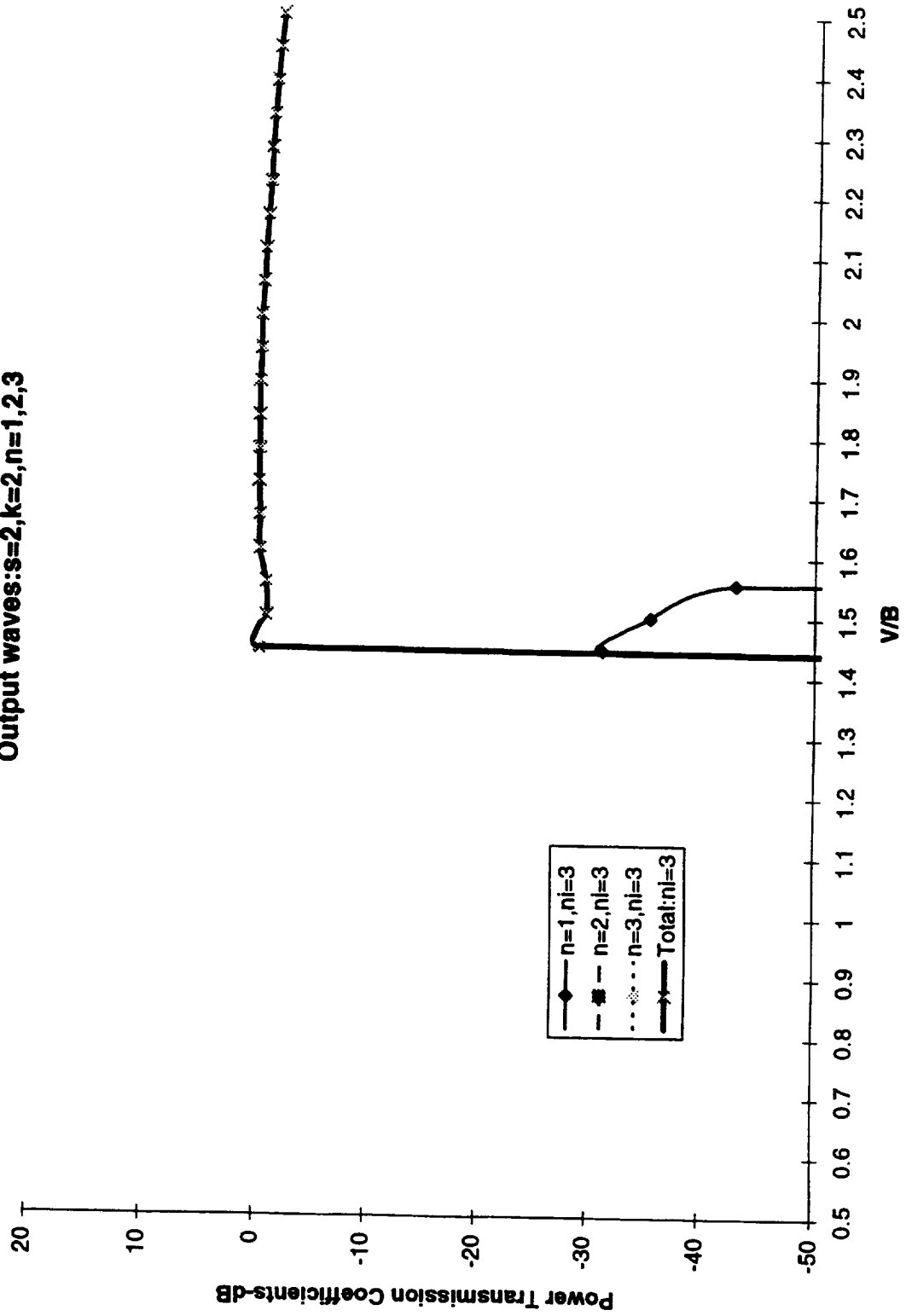
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_l=2, k_l=1, n_l=3$

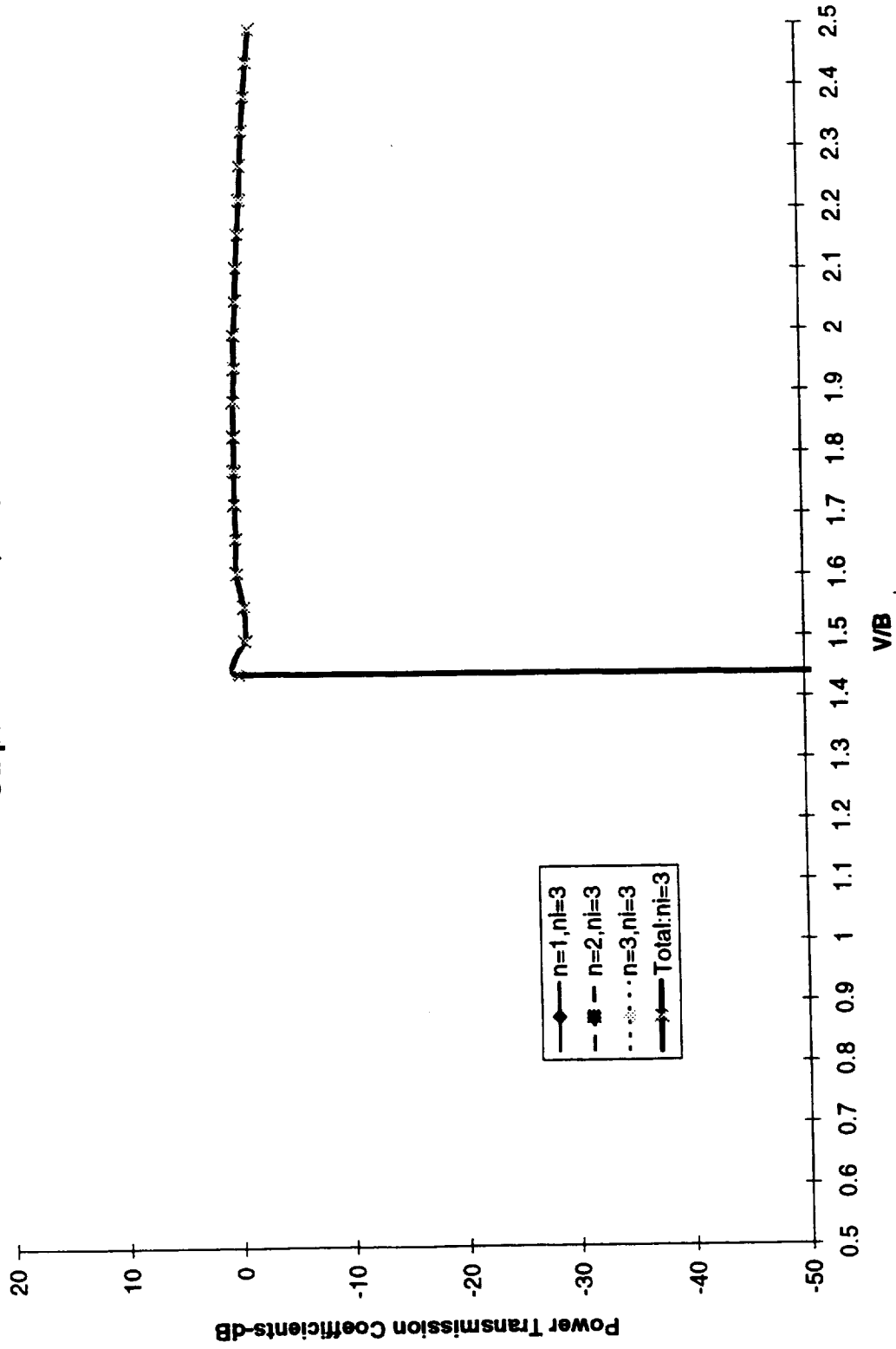
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=1, n_i=3$

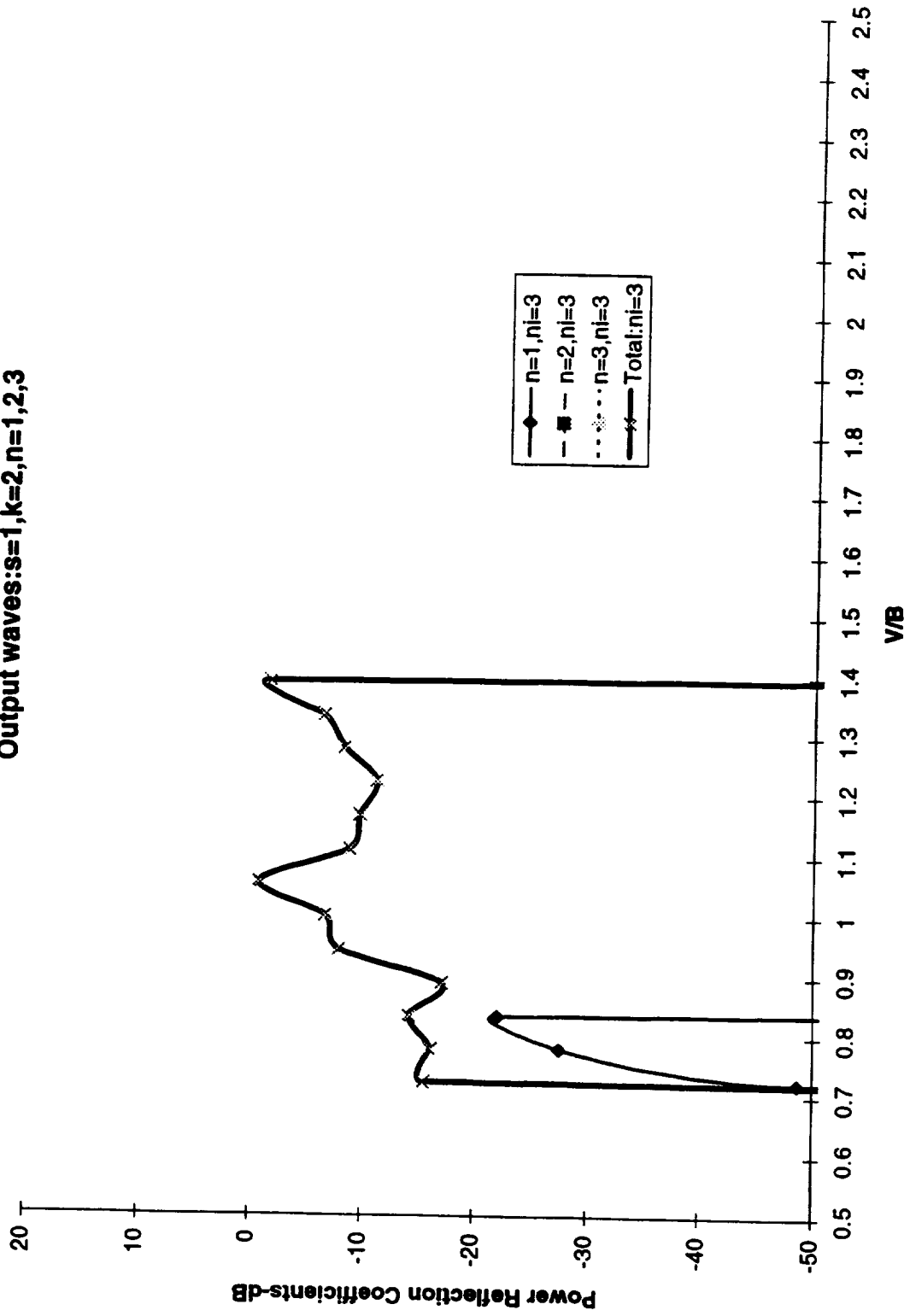
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=2, k_l=2, n_i=3$

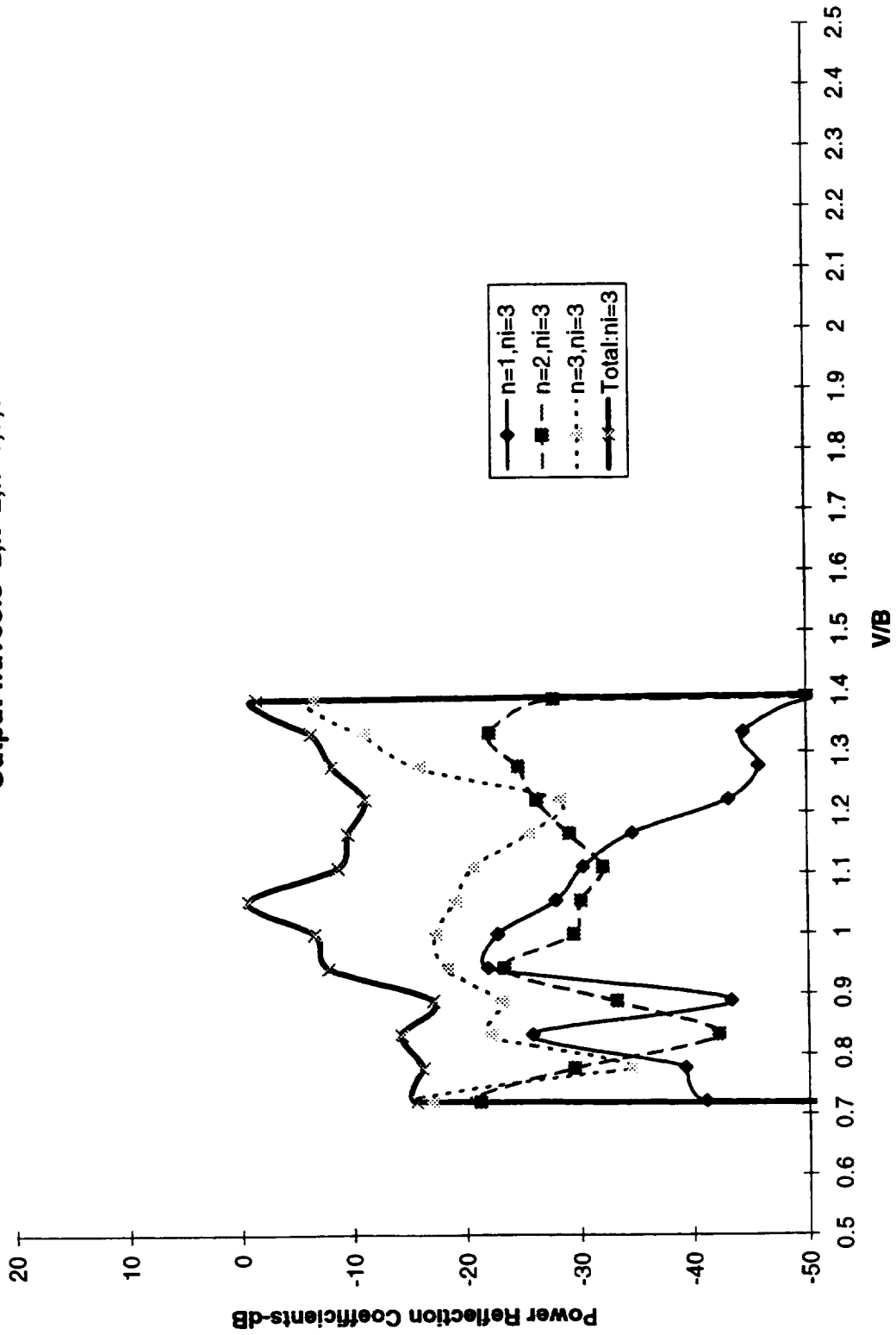
Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=2, k_l=2, n_l=3$

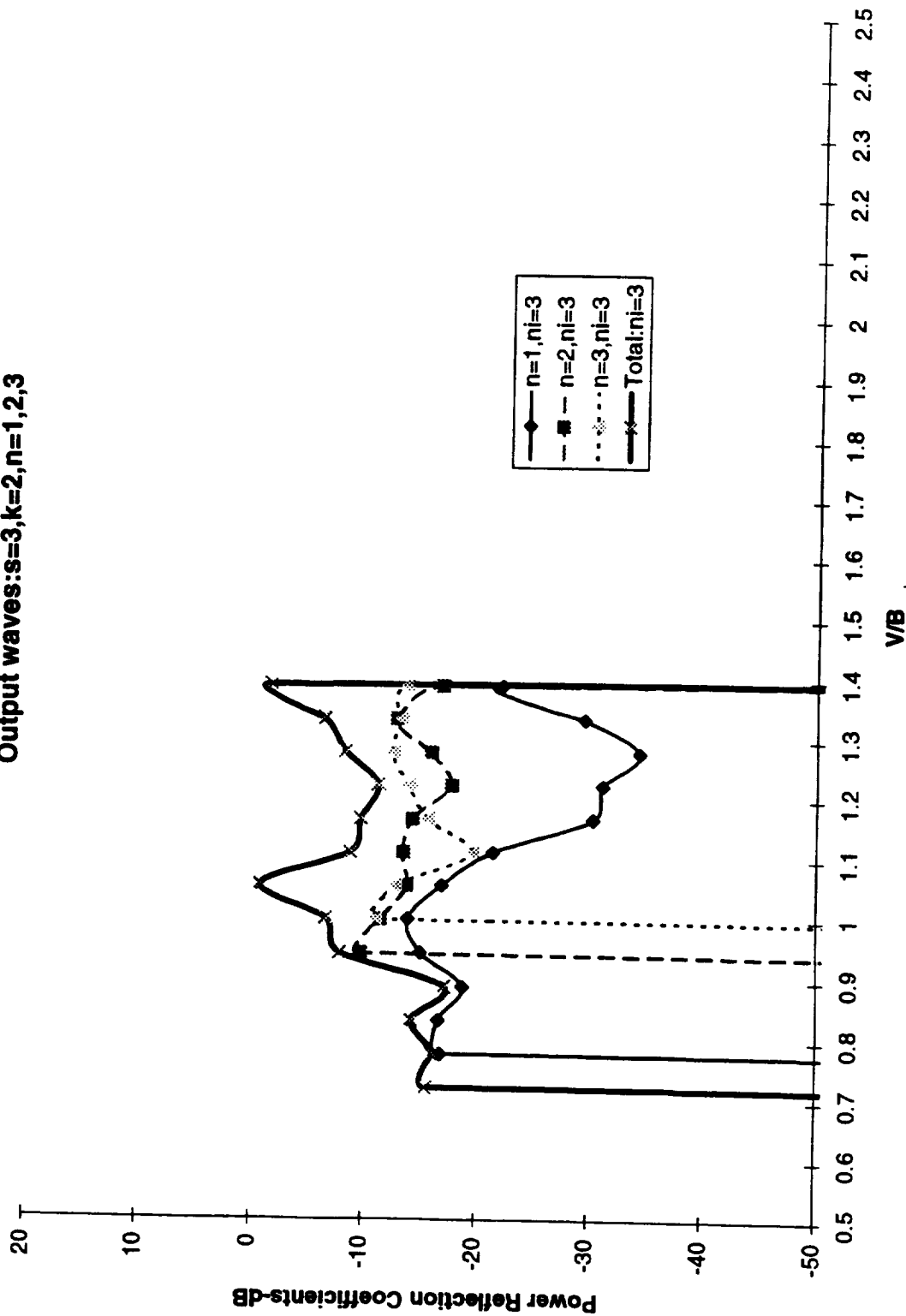
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

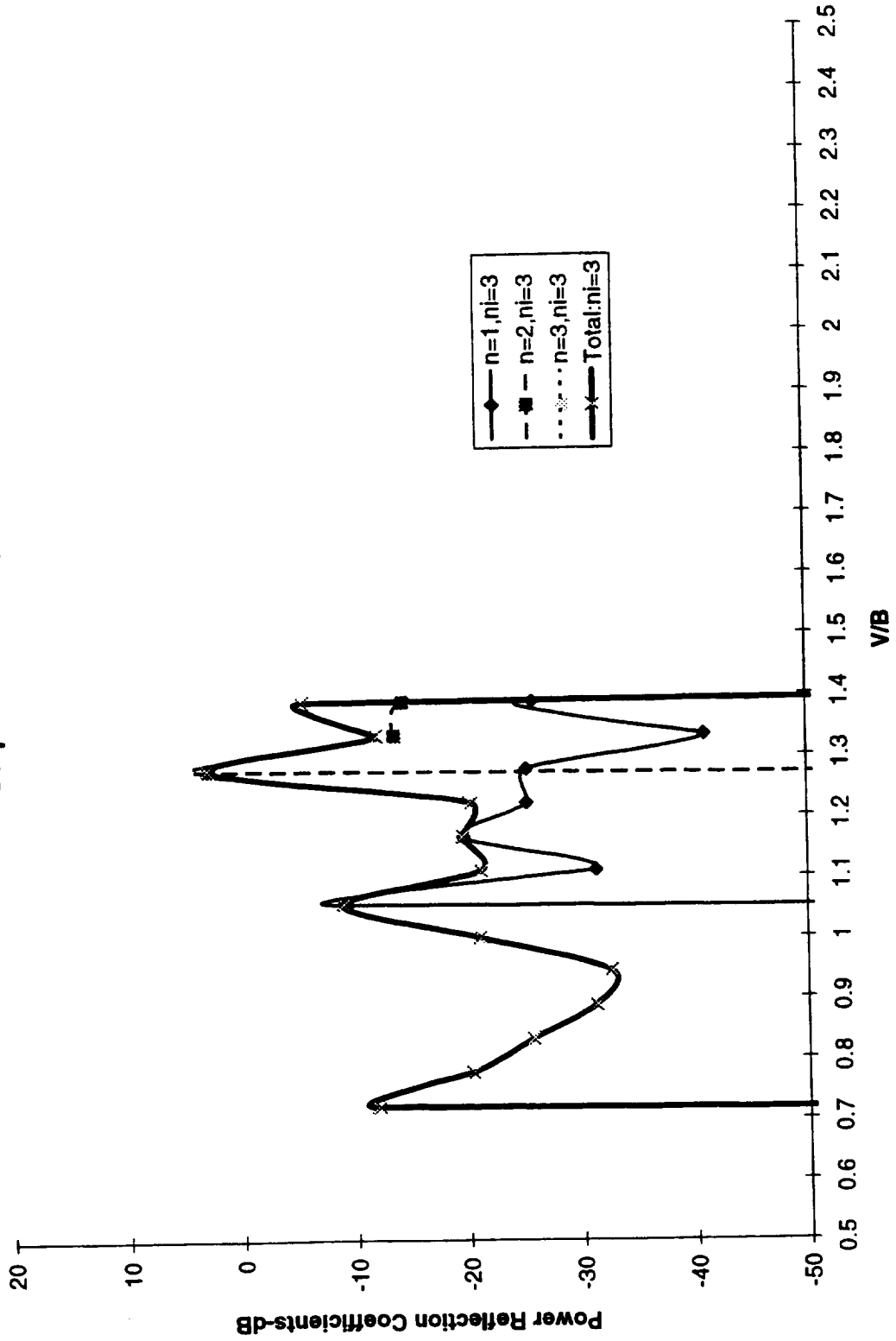
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

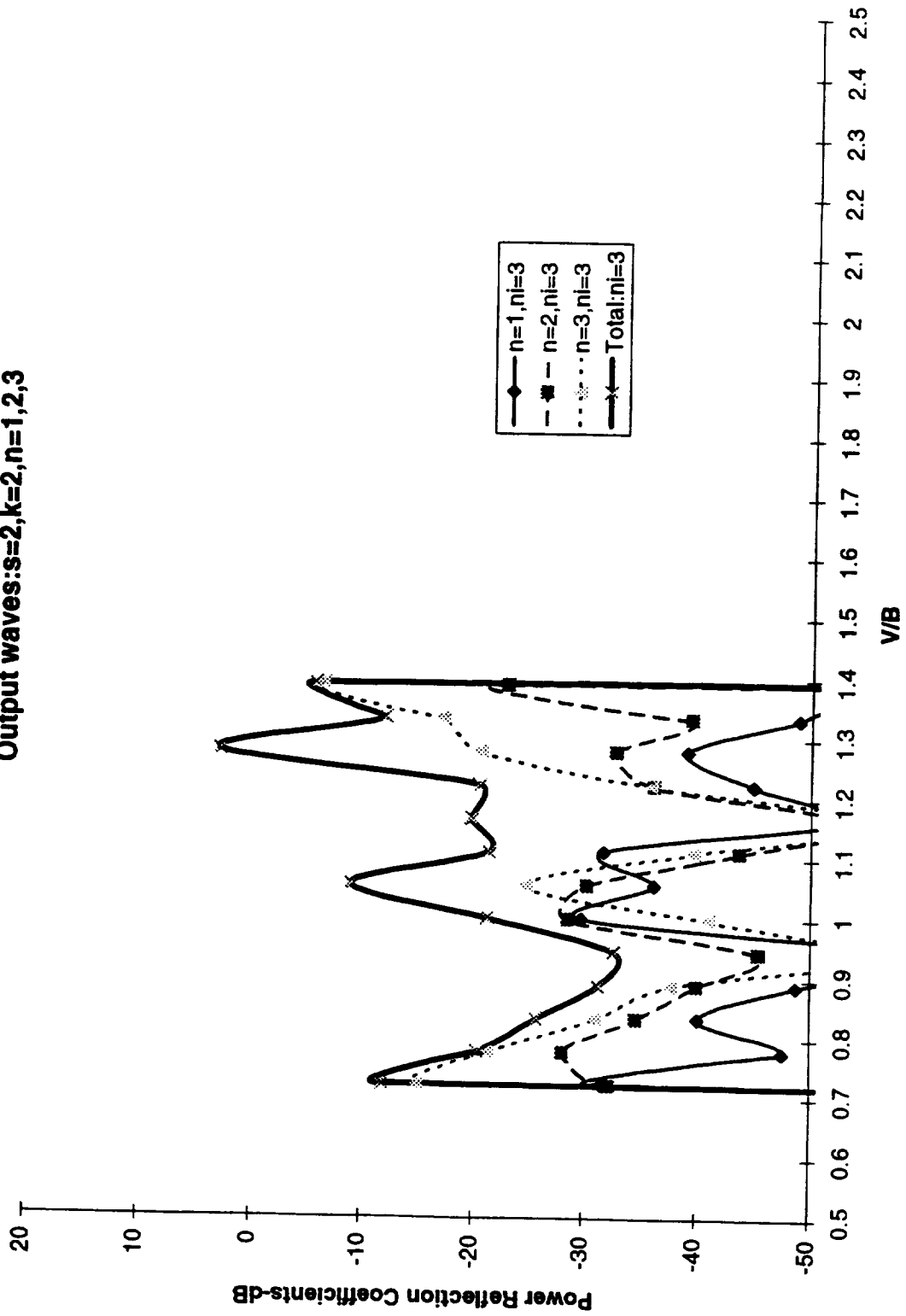
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

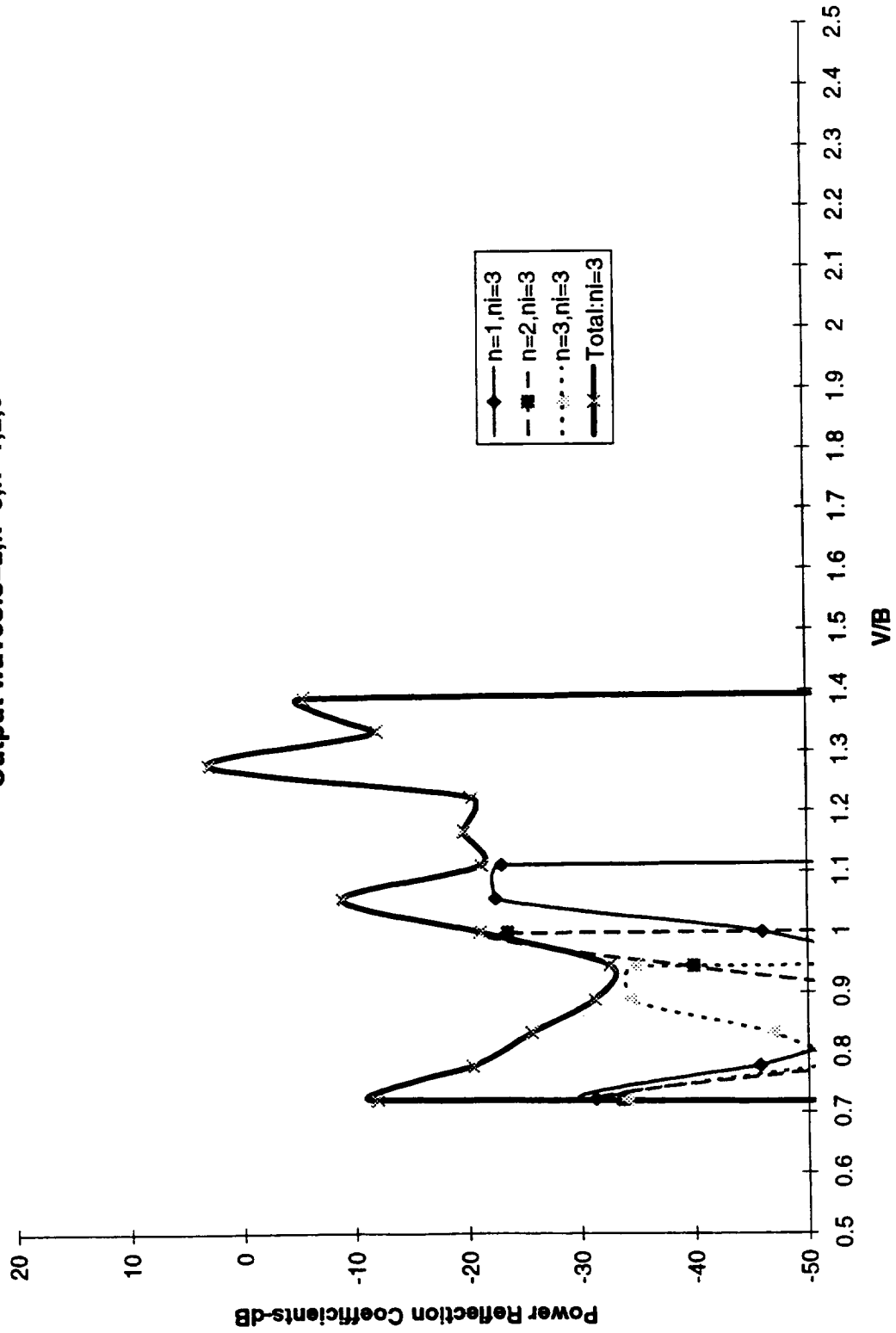
Output waves: $s=2, k=2, n=1, 2, 3$



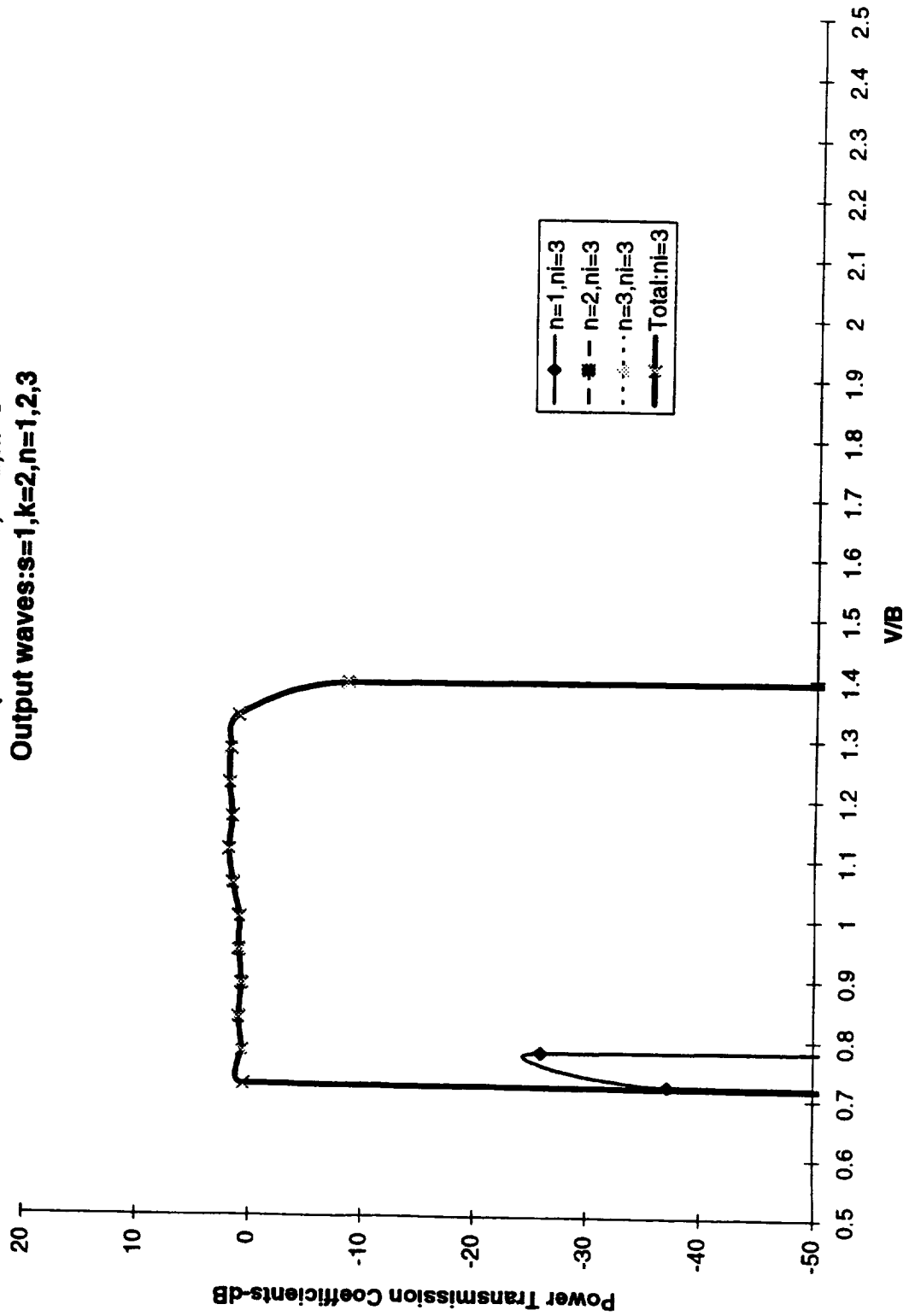
Stator Reflection-Mid Speed Case

Input wave: $sl=2, ki=2, nl=3$

Output waves: $s=2, k=3, n=1, 2, 3$



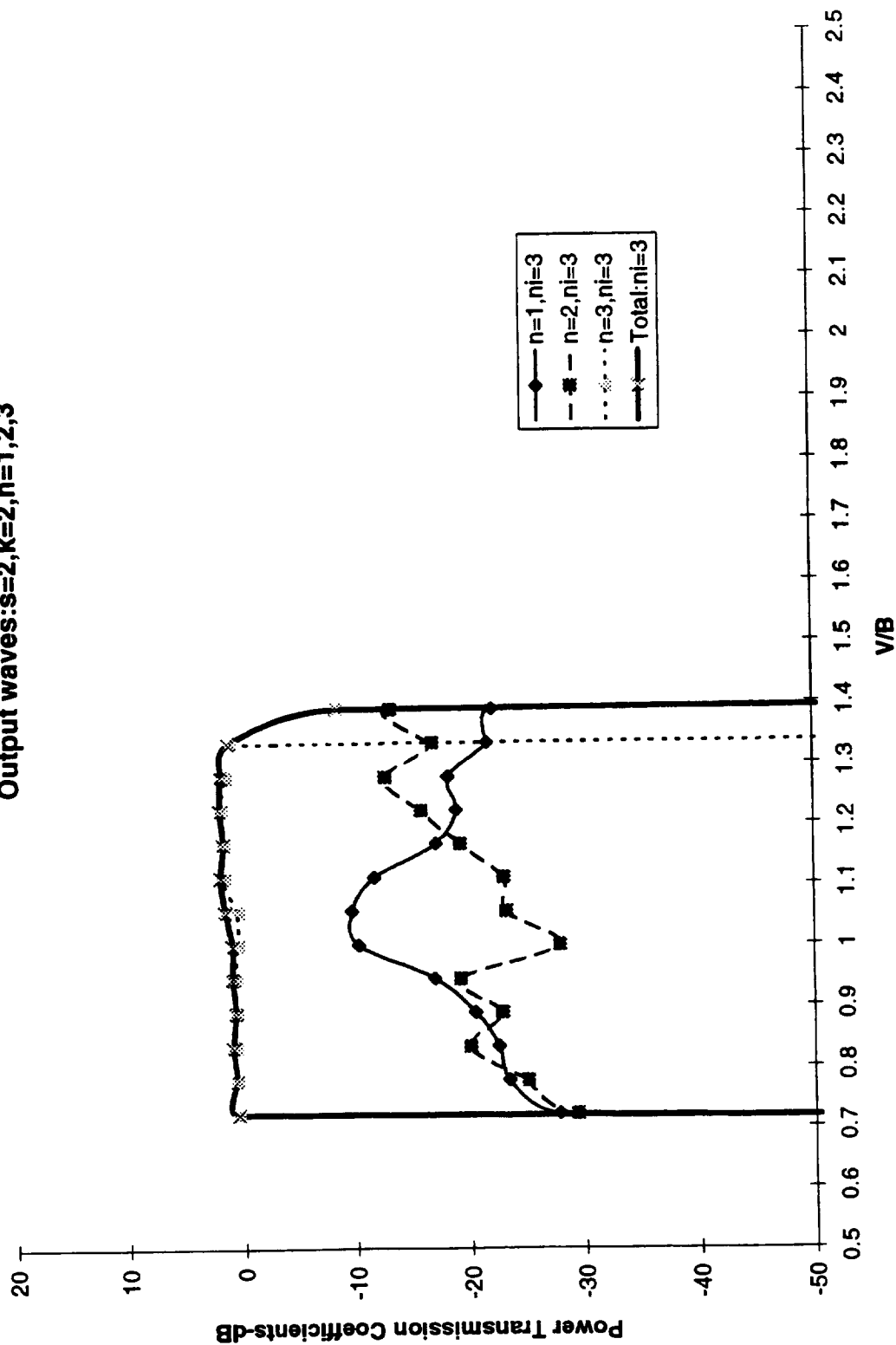
Rotor Transmission-Mid Speed Case
 Input wave: $s_i=2, k_i=2, n_i=3$
 Output waves: $s=1, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

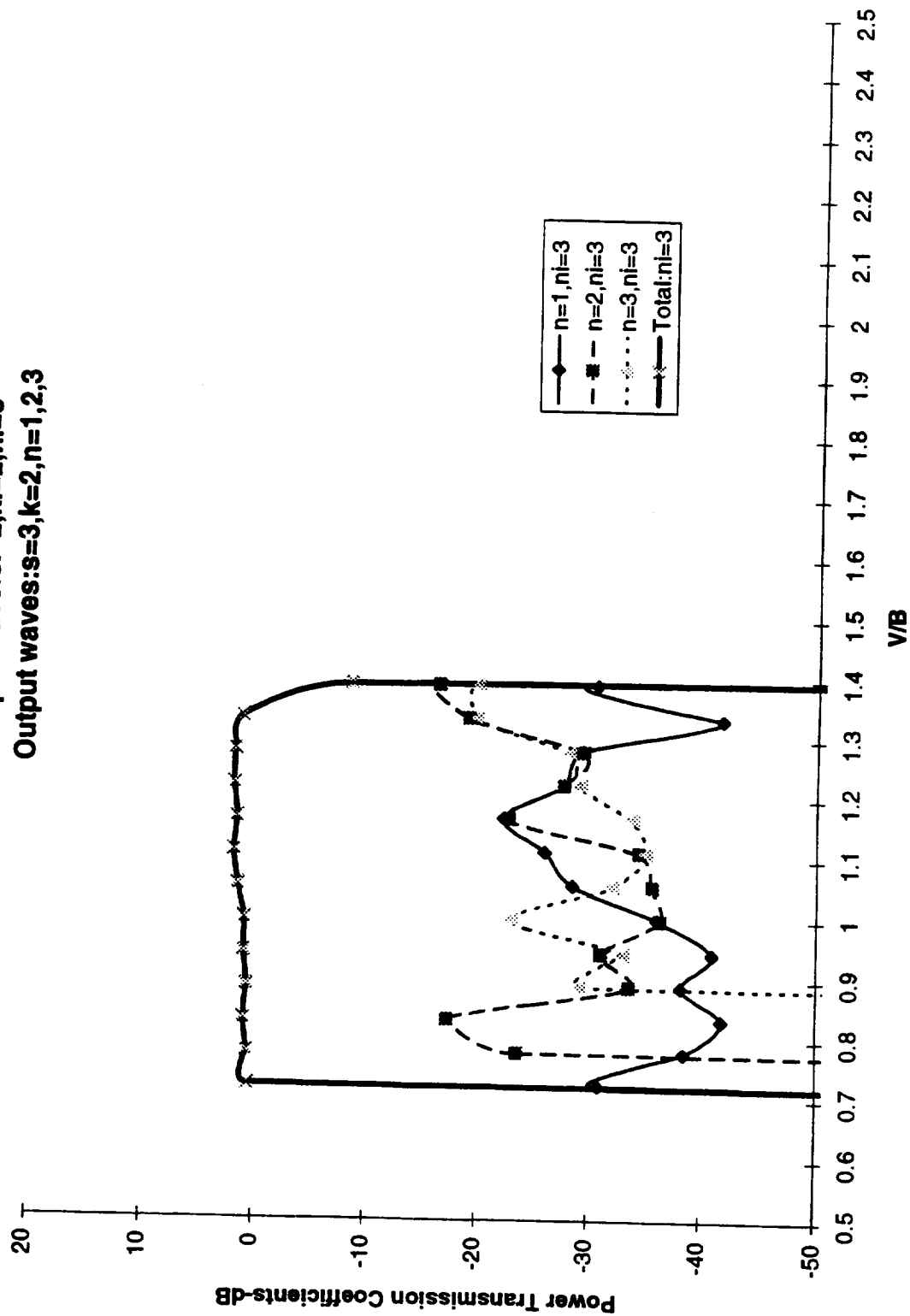
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=2, n_i=3$

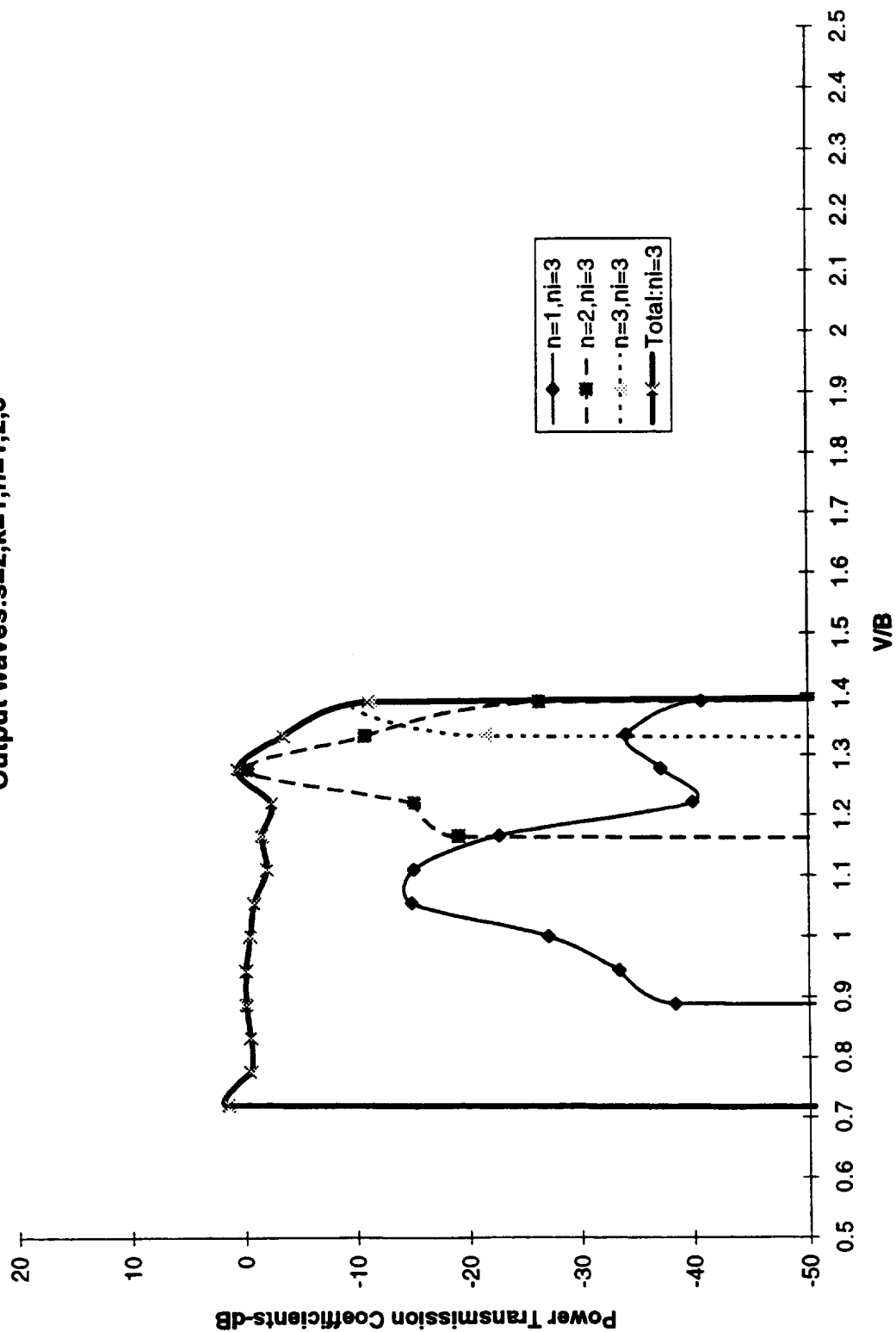
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_l=2, k_l=2, n_l=3$

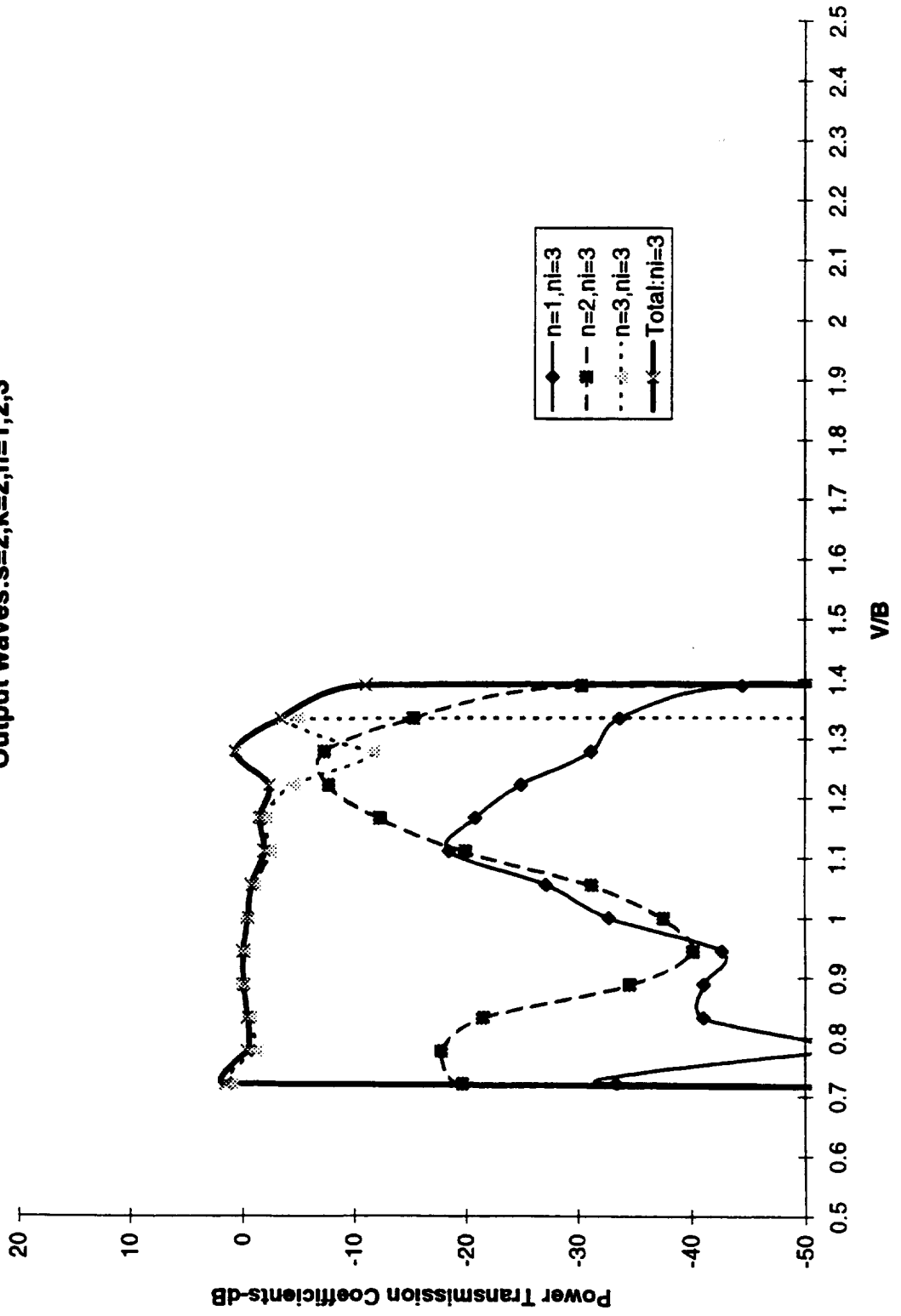
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_l=2, k_l=2, n_l=3$

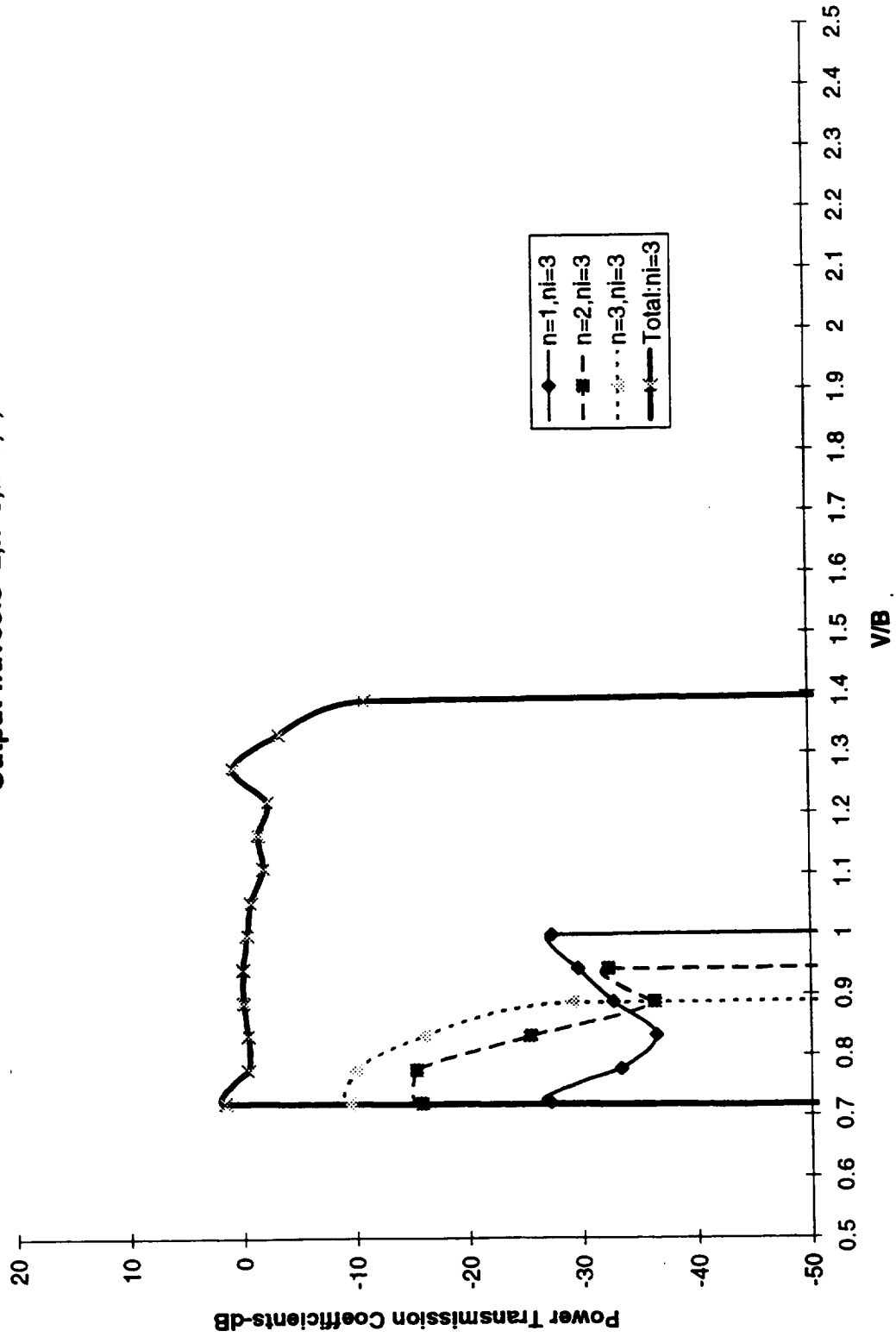
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $sl=2, kl=2, nl=3$

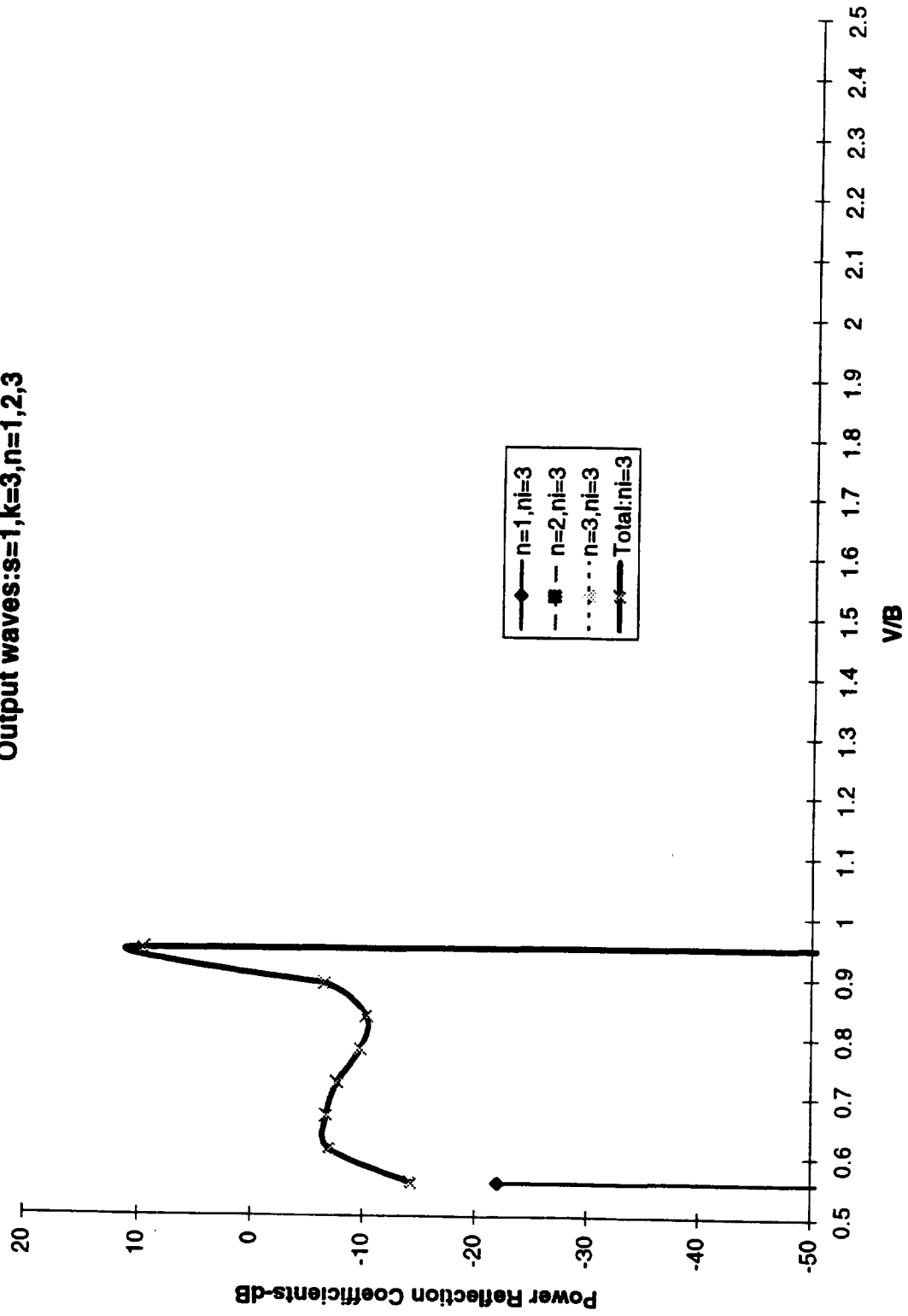
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=2, k_l=3, n_l=3$

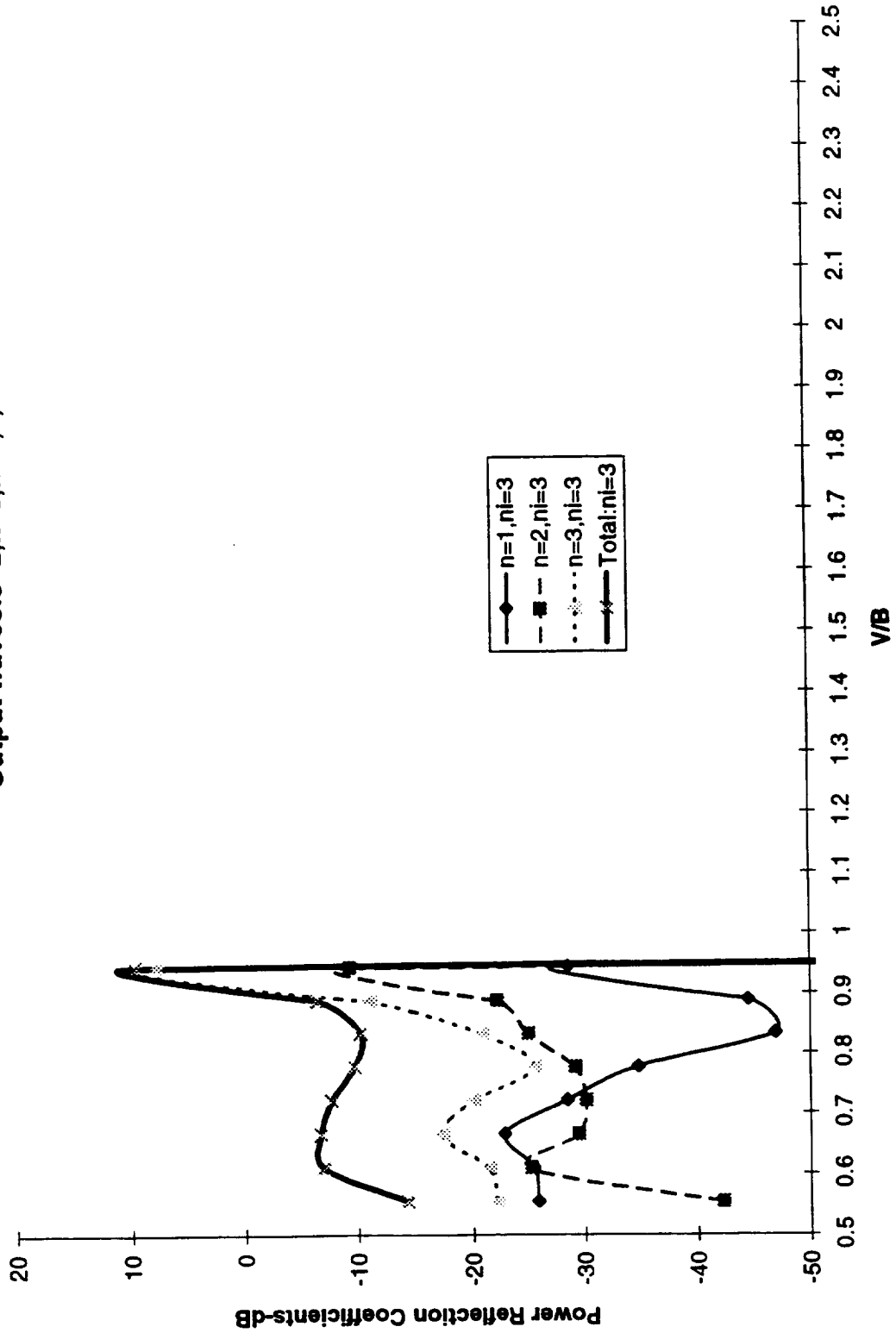
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

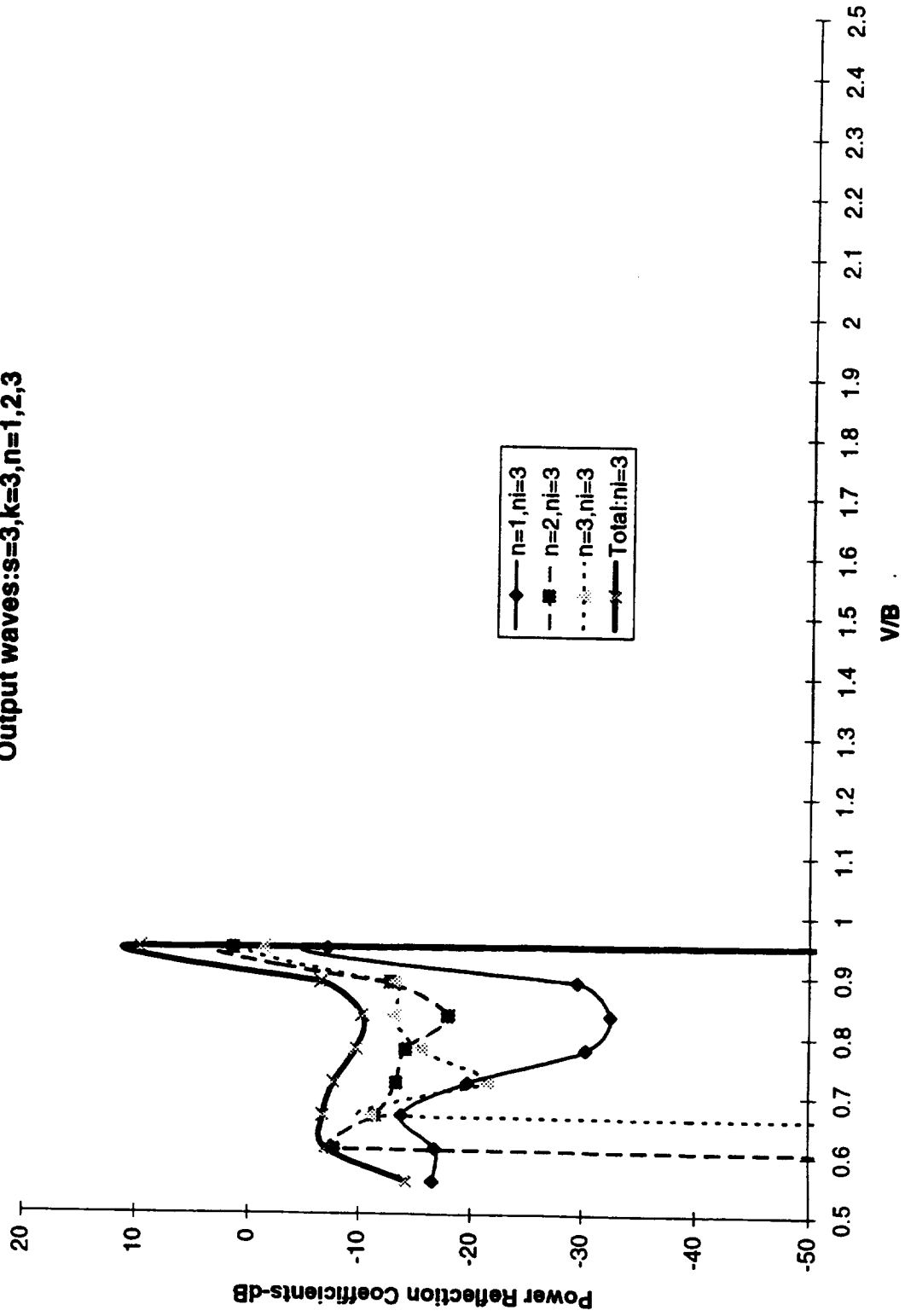
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=2, k_l=3, n_l=3$

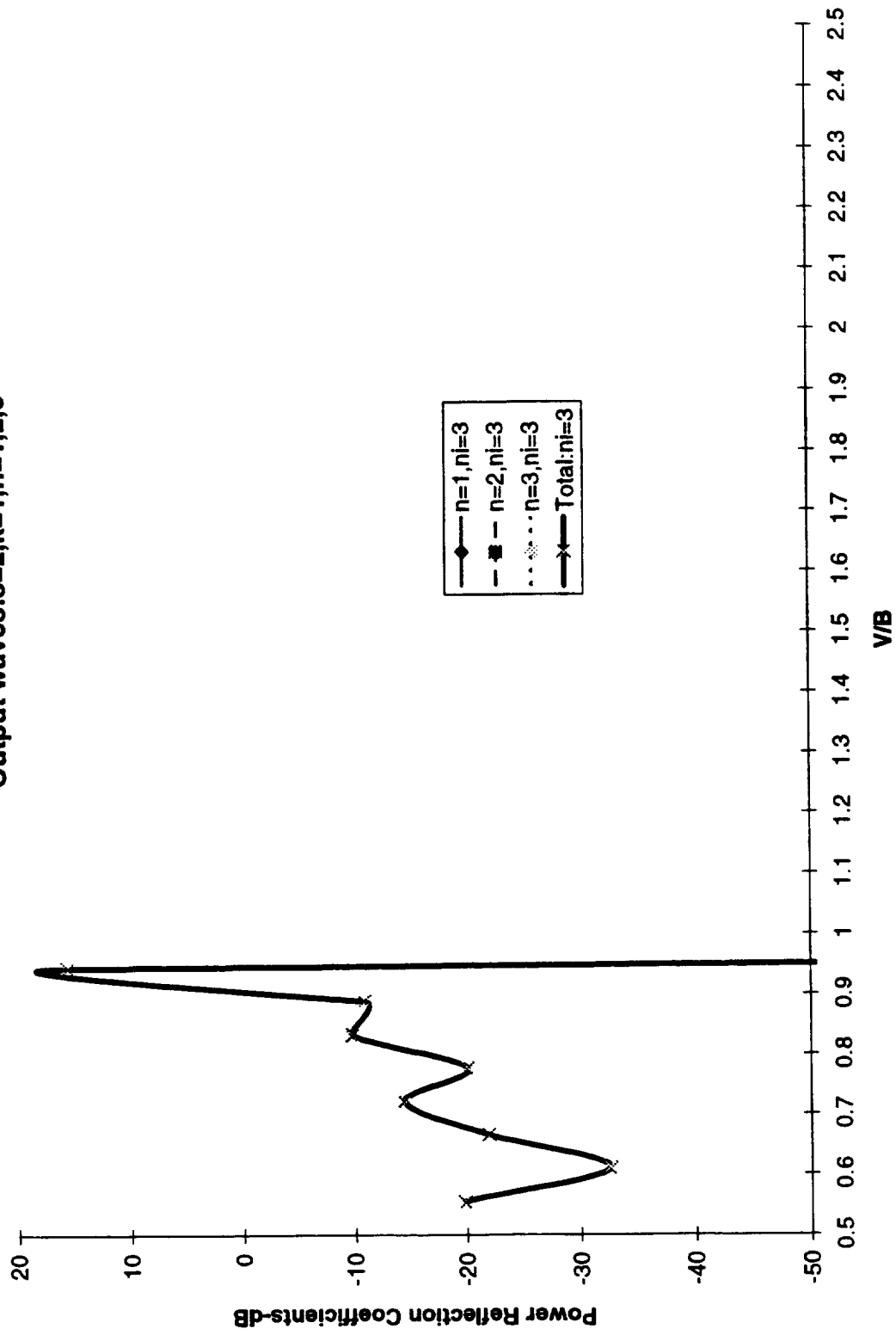
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

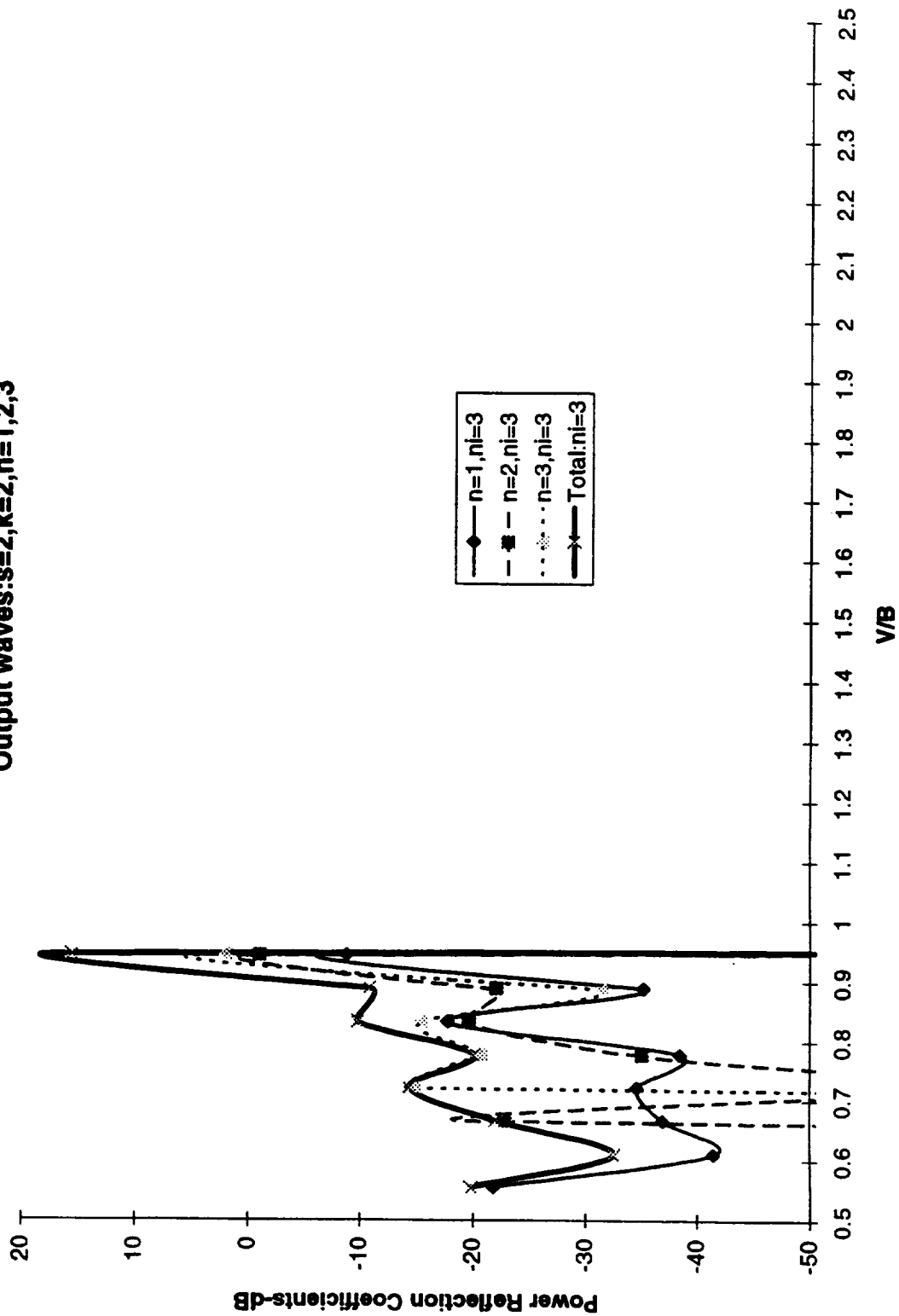
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $sl=2, ki=3, nl=3$

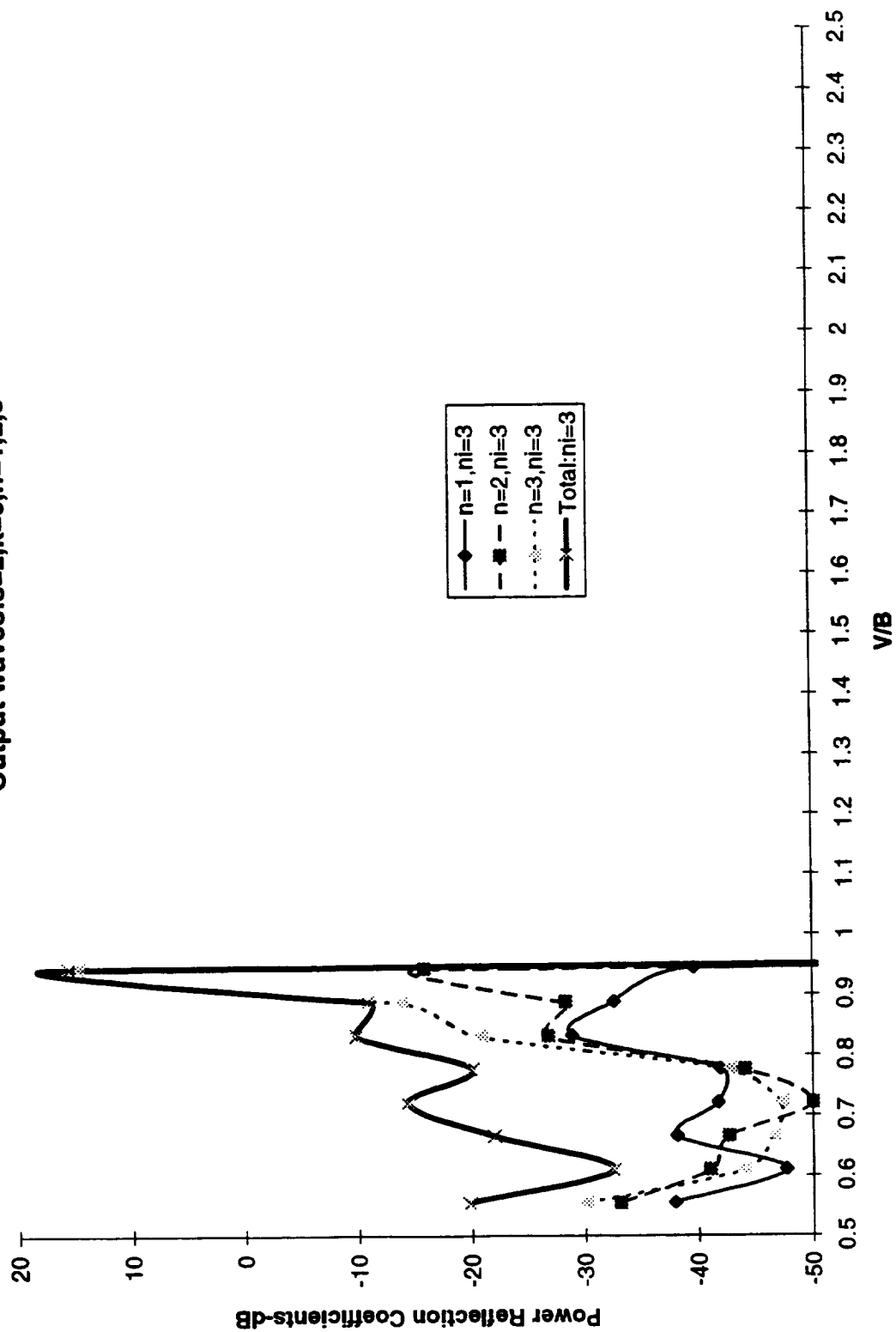
Output waves: $s=2, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

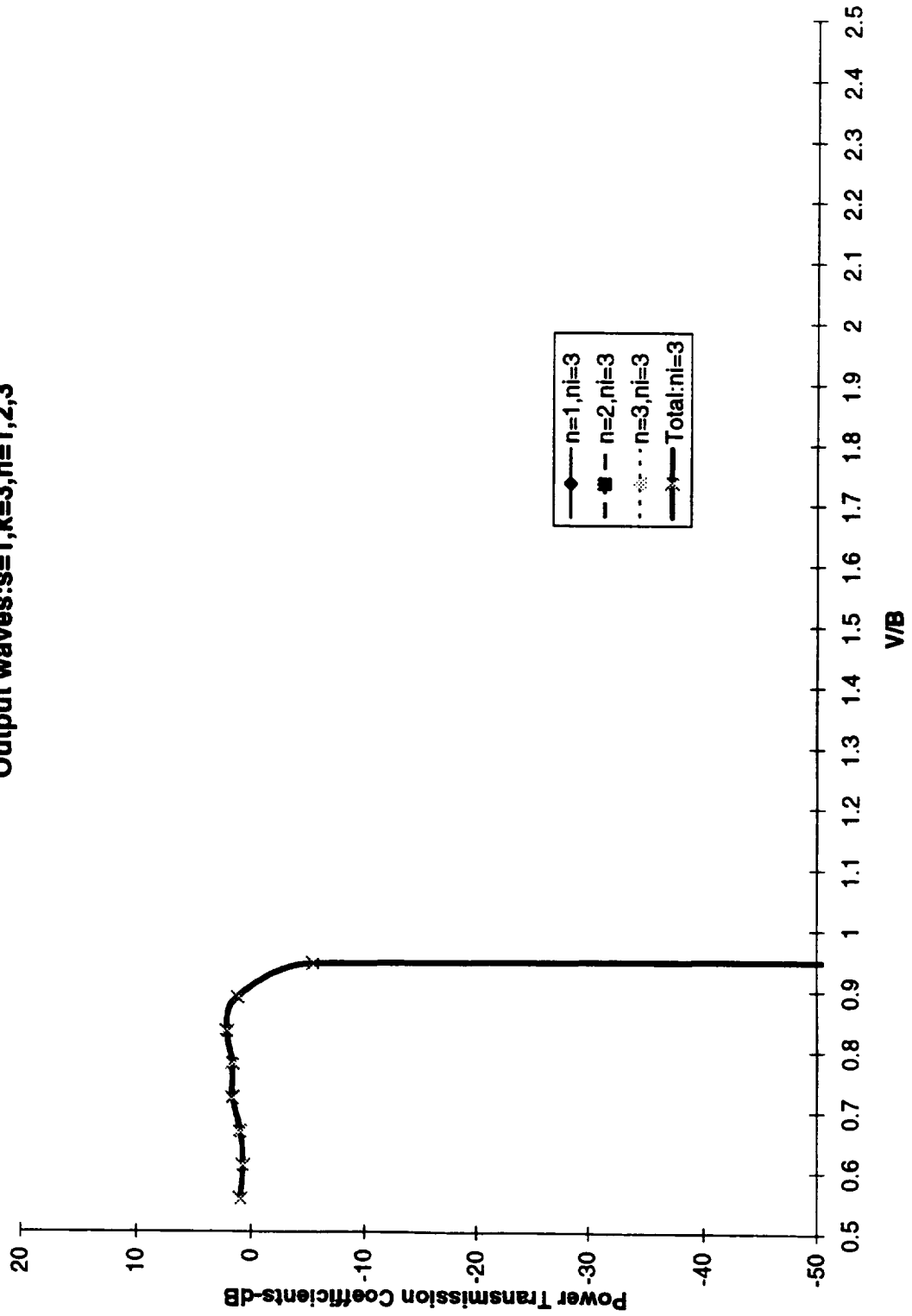
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $sl=2, ki=3, nl=3$

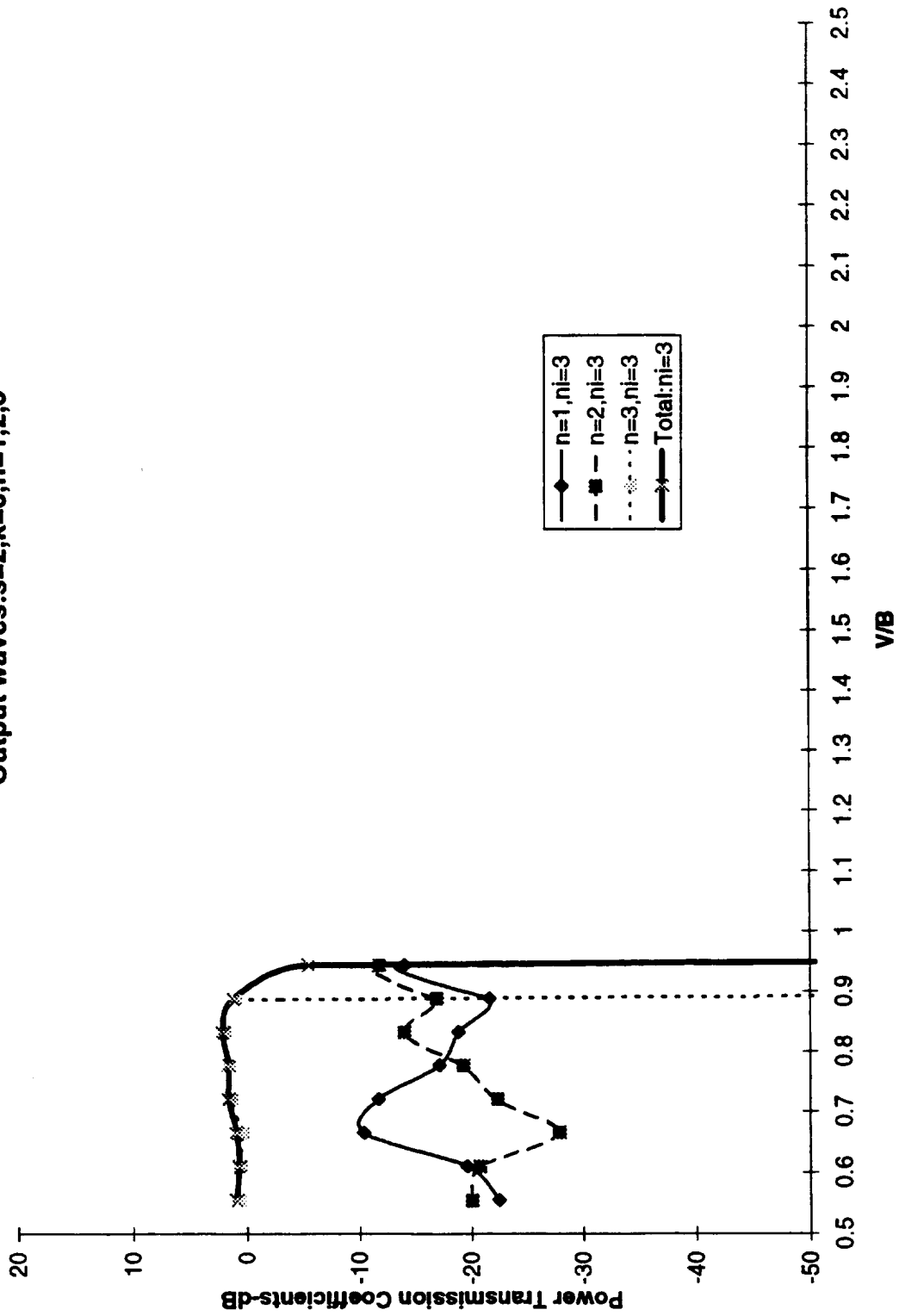
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

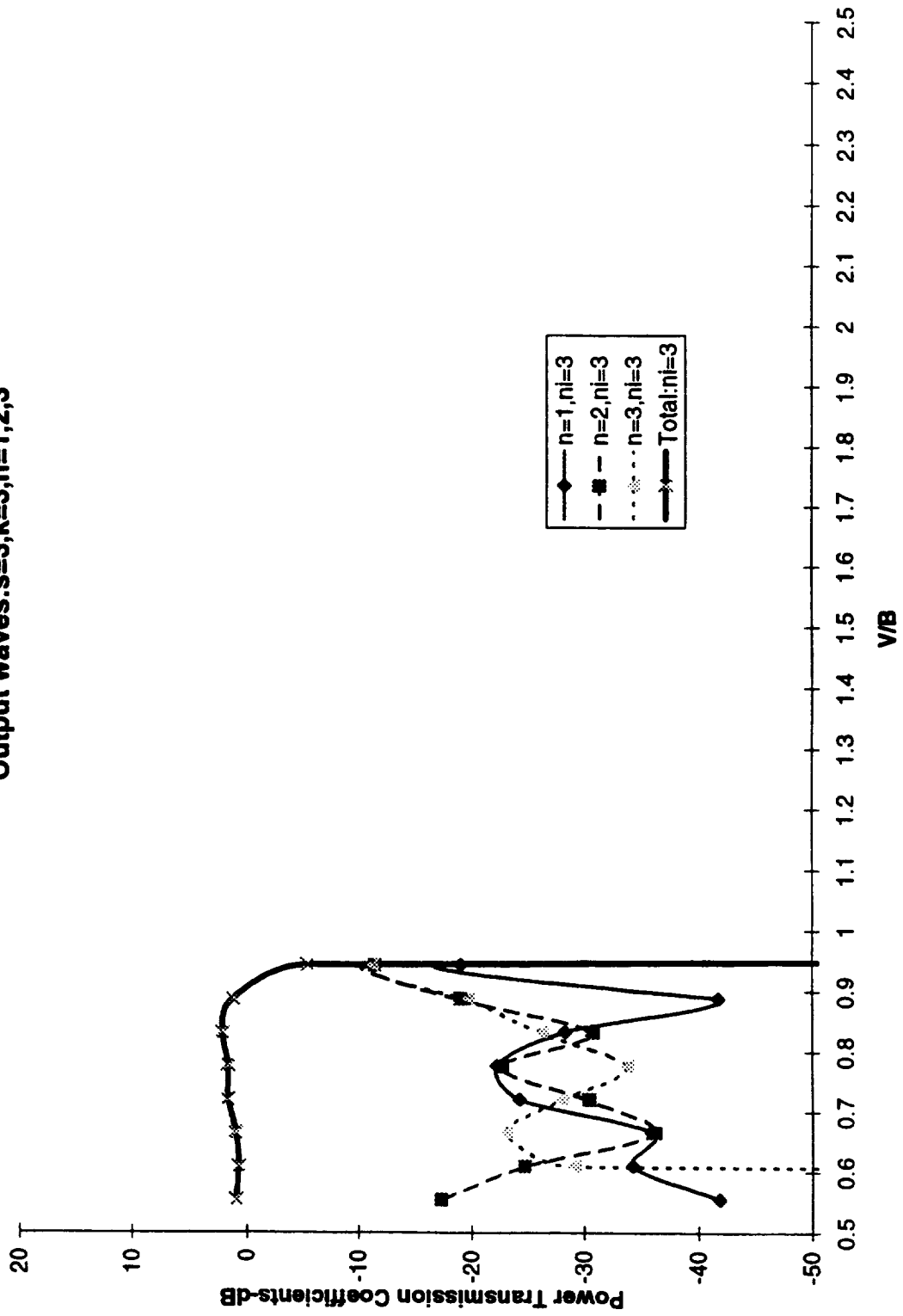
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

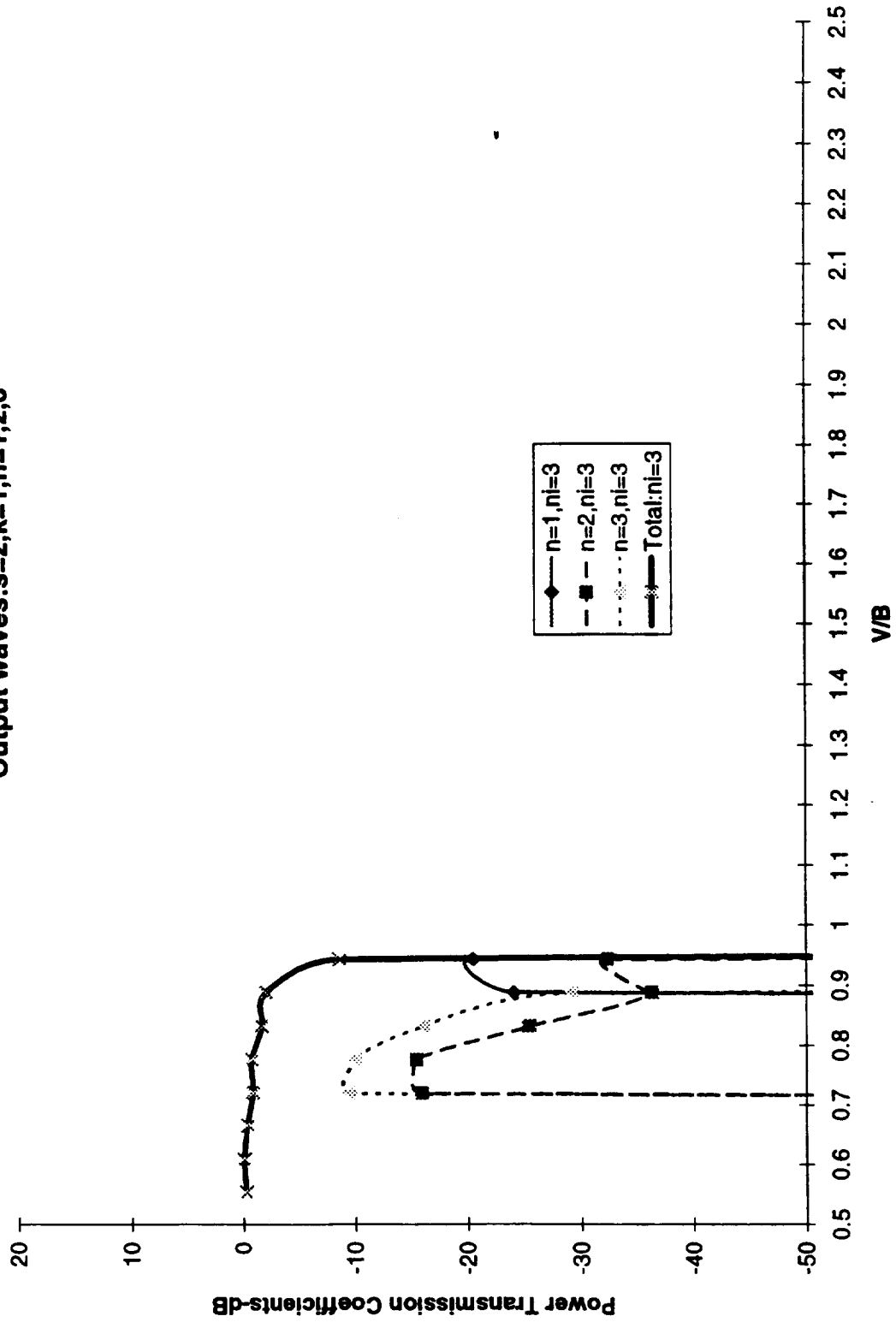
Output wave: $s=3, k=3, n=1, 2, 3$



Stator Transmission-Mld Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

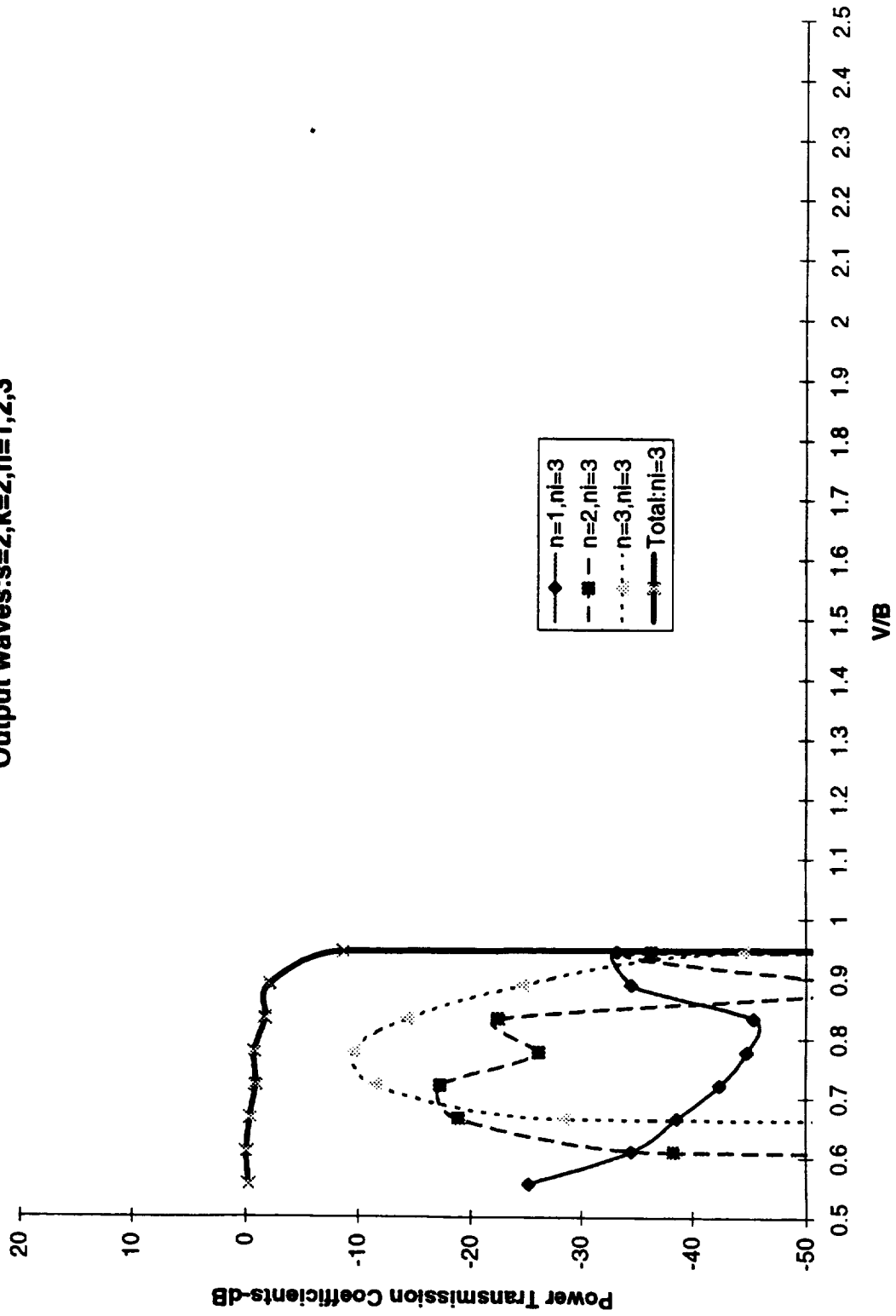
Output waves: $s=2, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=2, k_i=3, n_i=3$

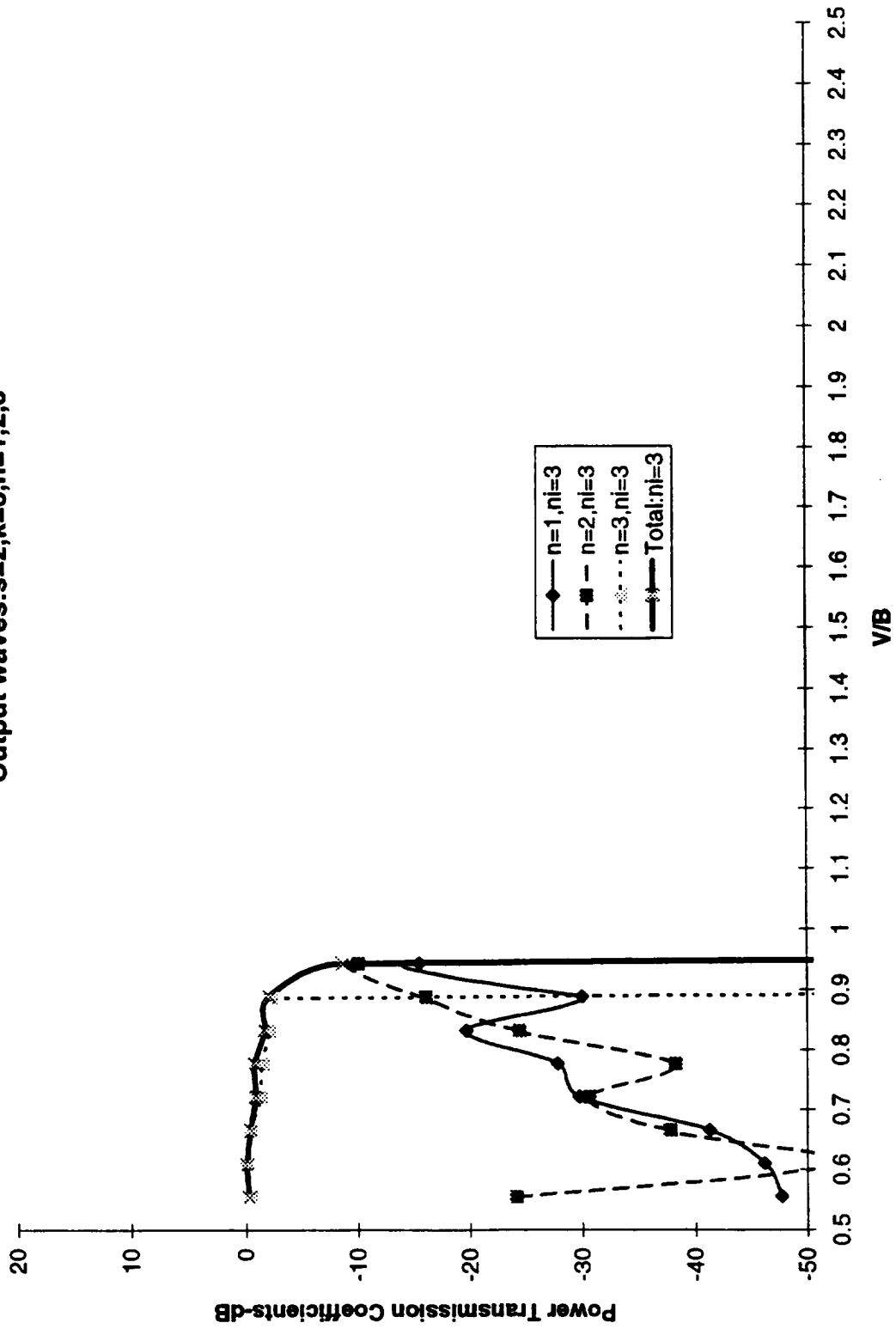
Output waves: $s=2, k=2, n=1, 2, 3$



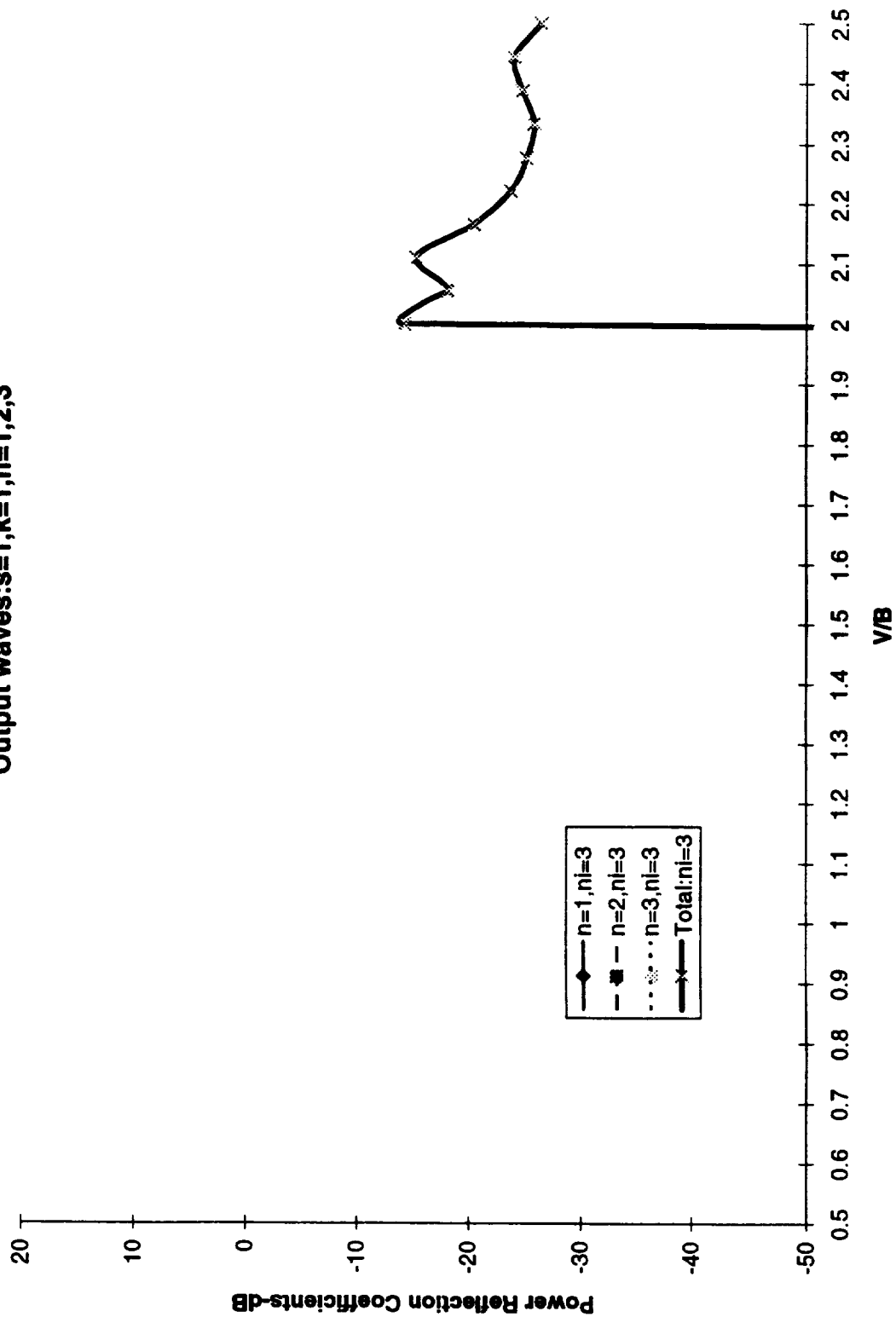
Stator Transmission-Mid Speed Case

Input wave: $s_l=2, k_l=3, n_l=3$

Output waves: $s=2, k=3, n=1, 2, 3$



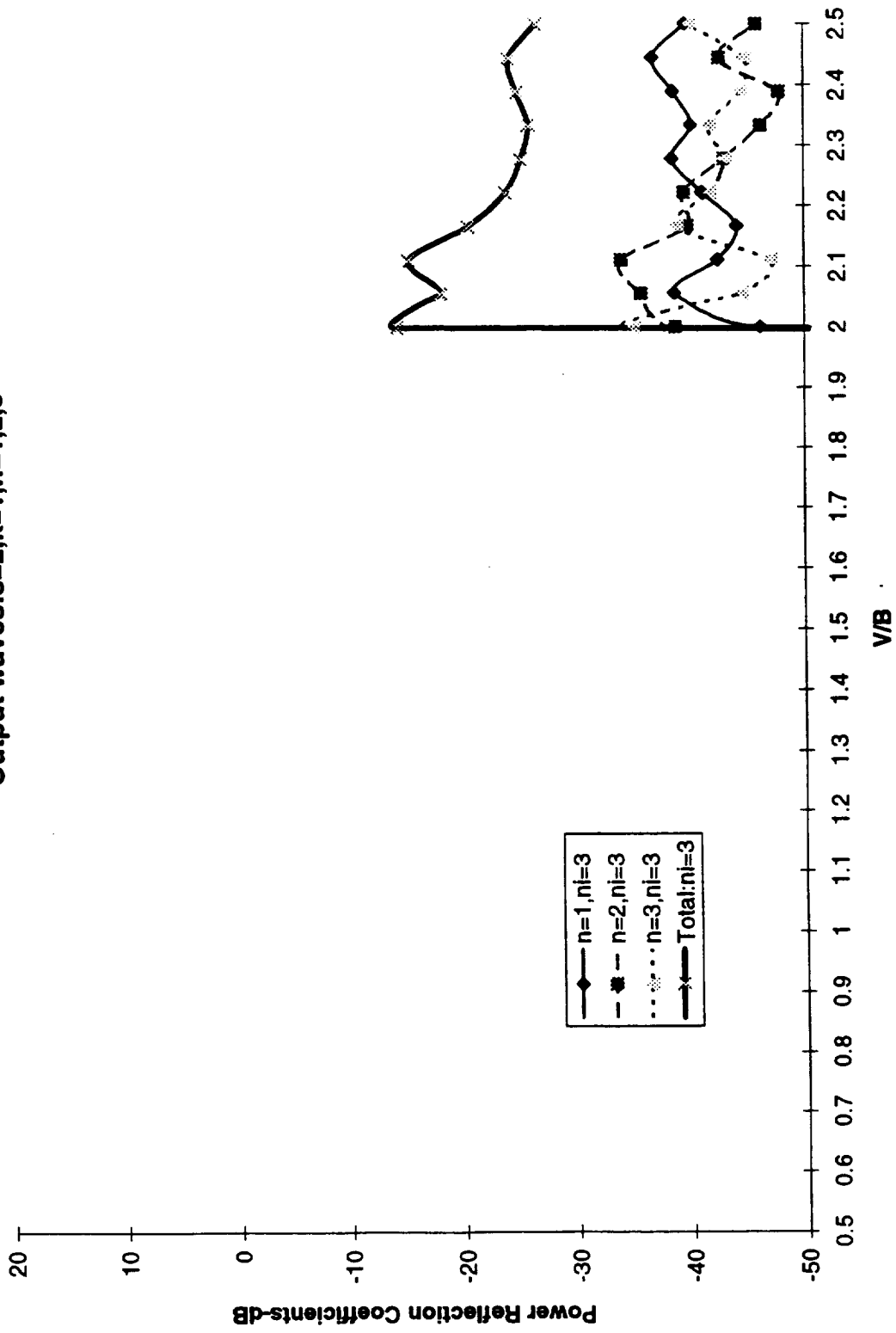
Rotor Reflection-Mid Speed Case
Input wave: $s_i=3, k_i=1, n_i=3$
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

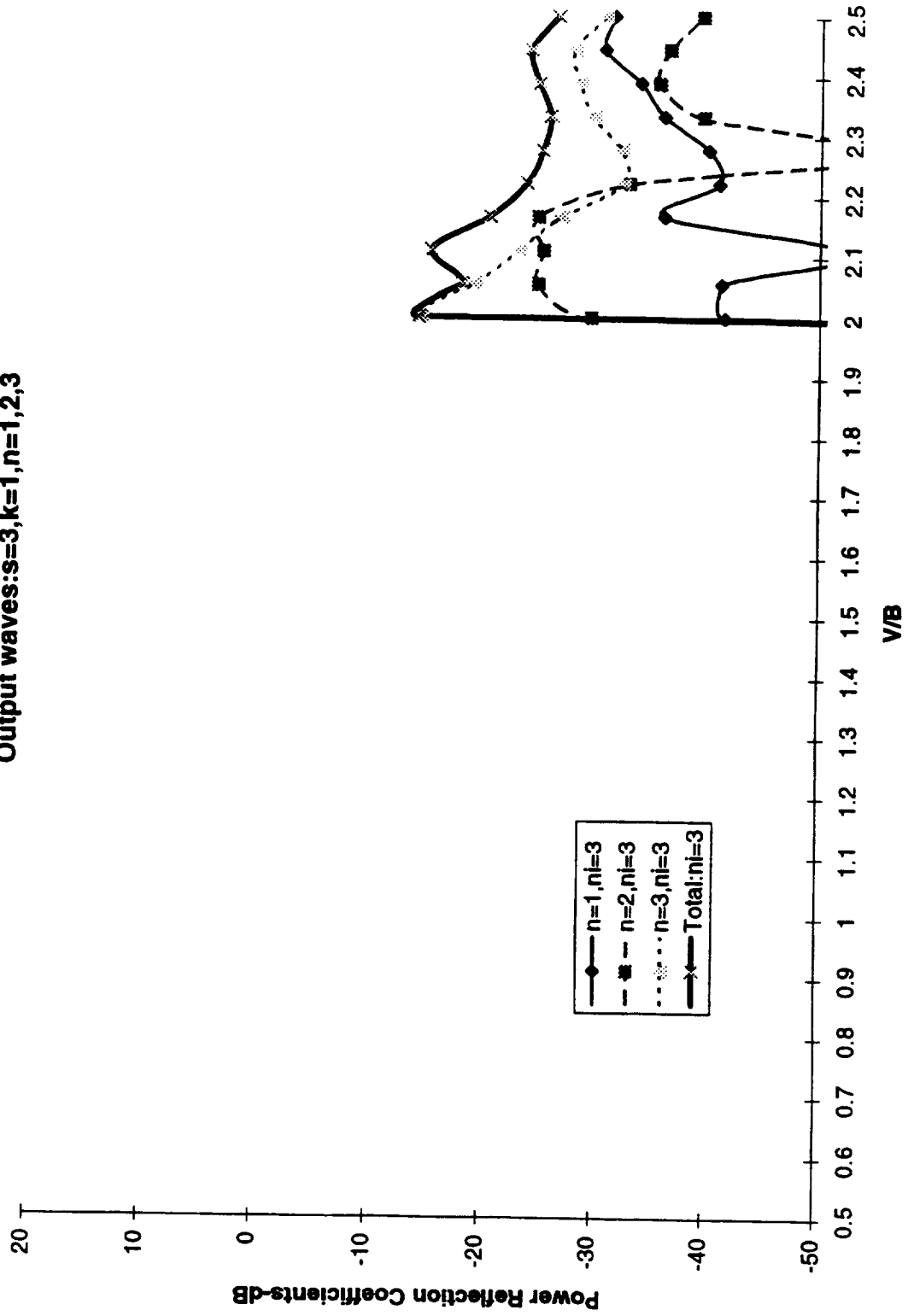
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_l=3, k_l=1, n_l=3$

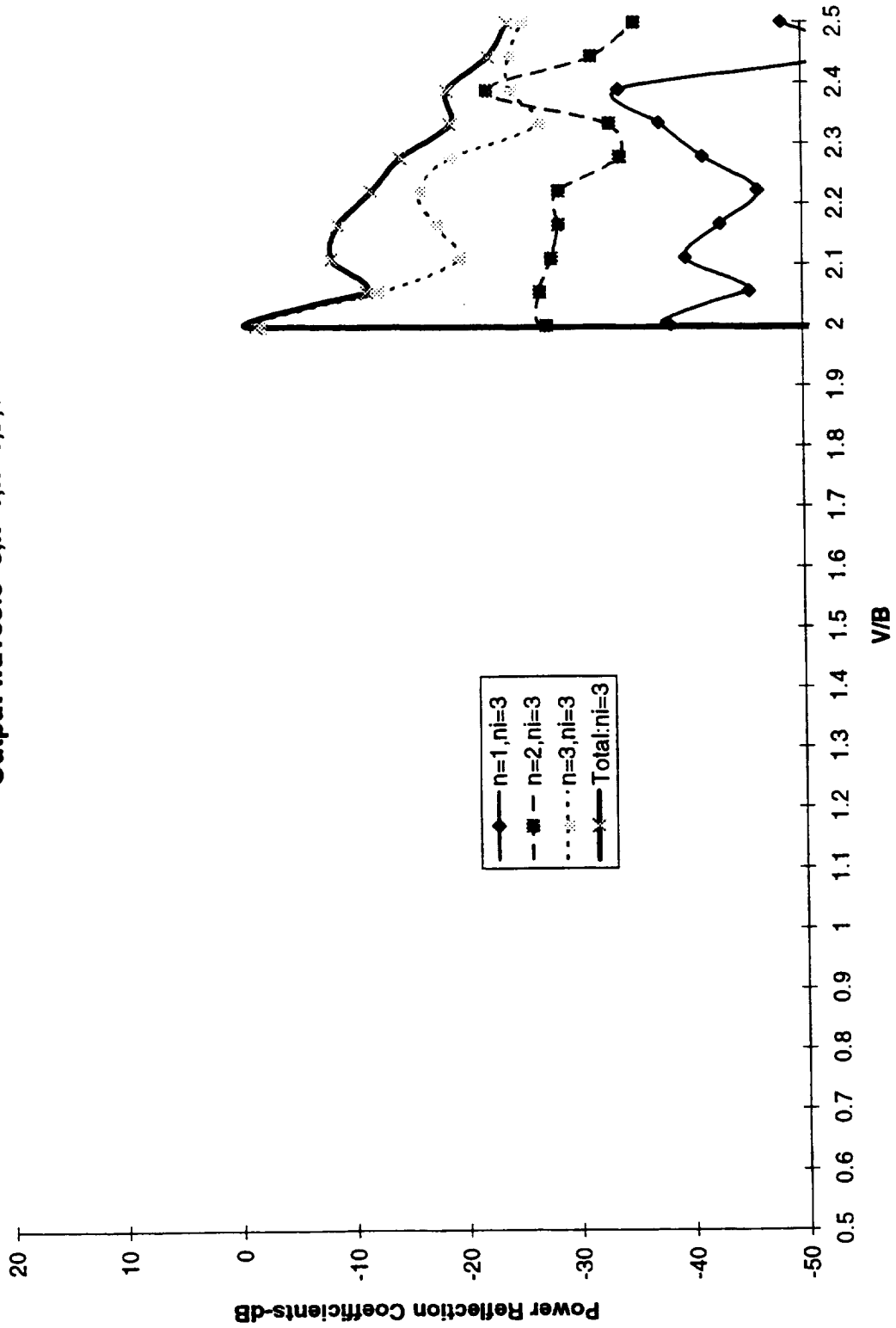
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

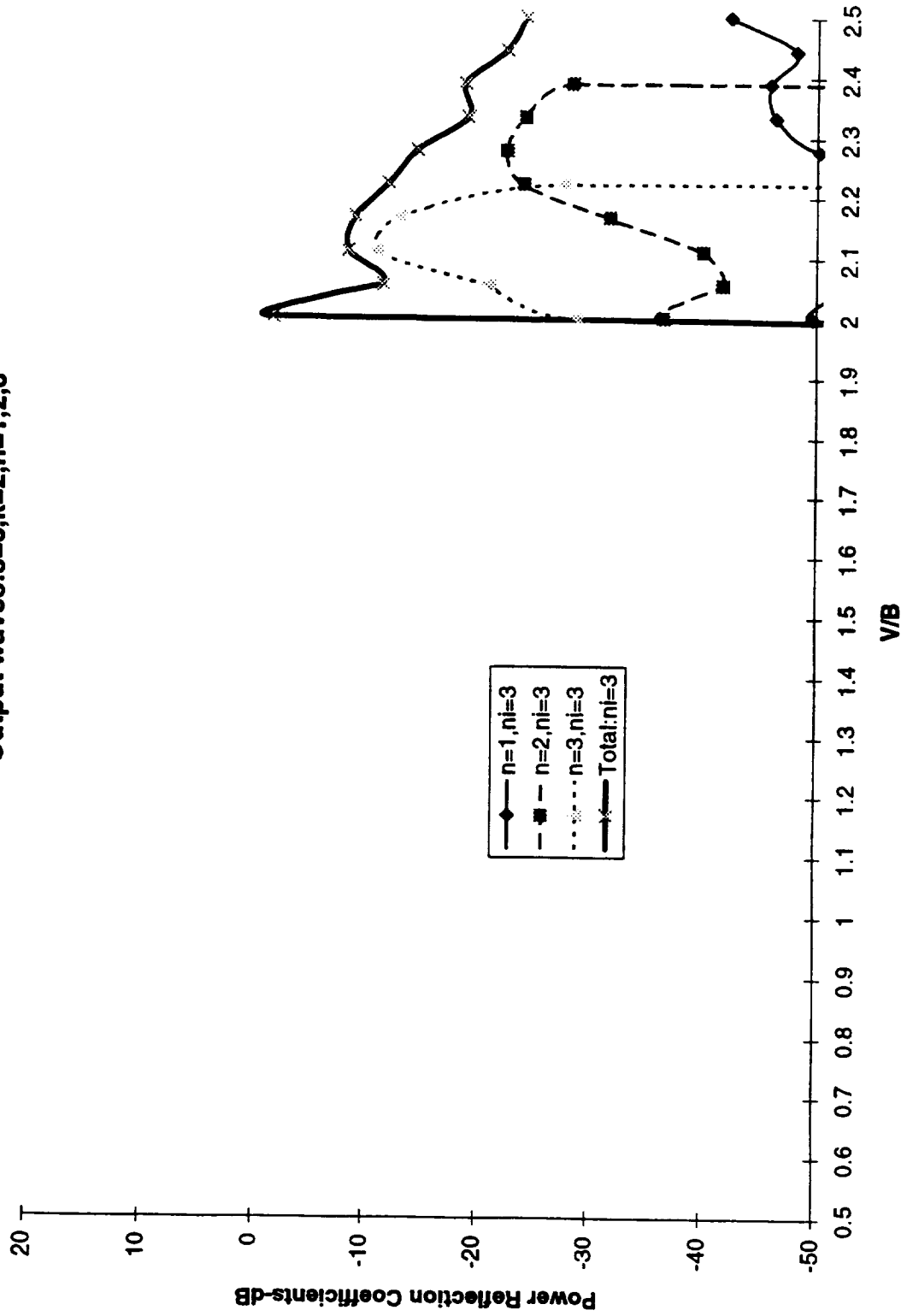
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

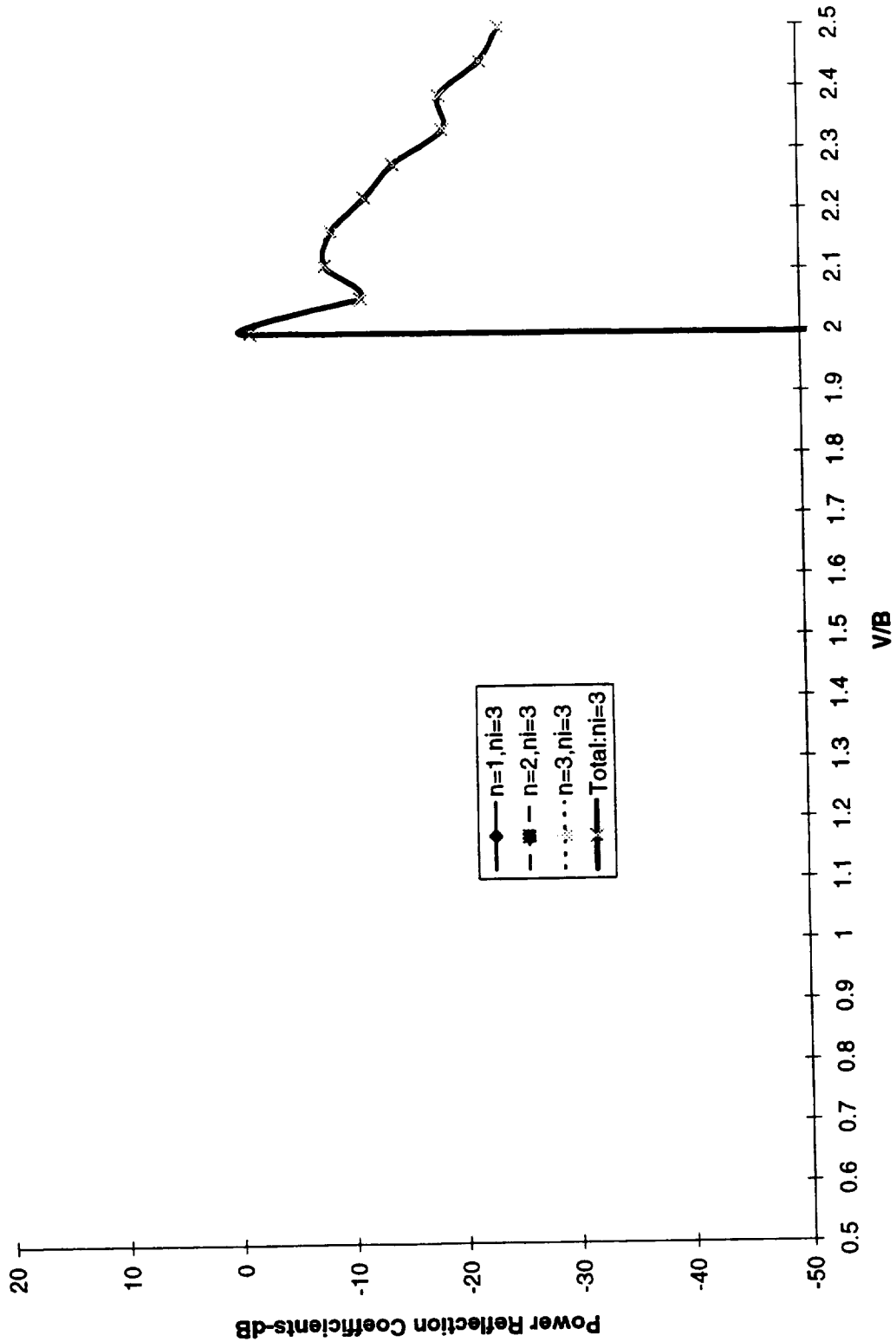
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

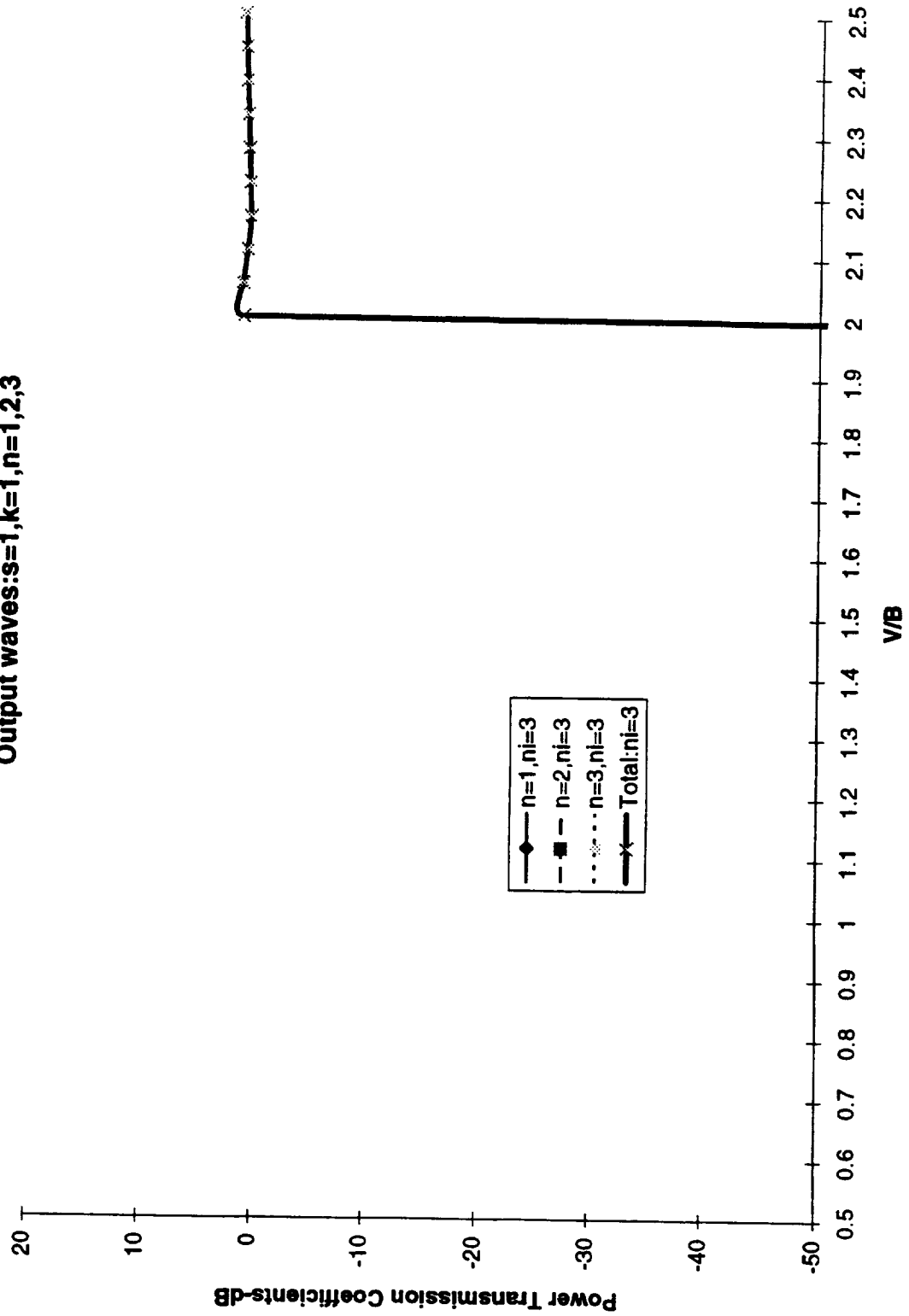
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

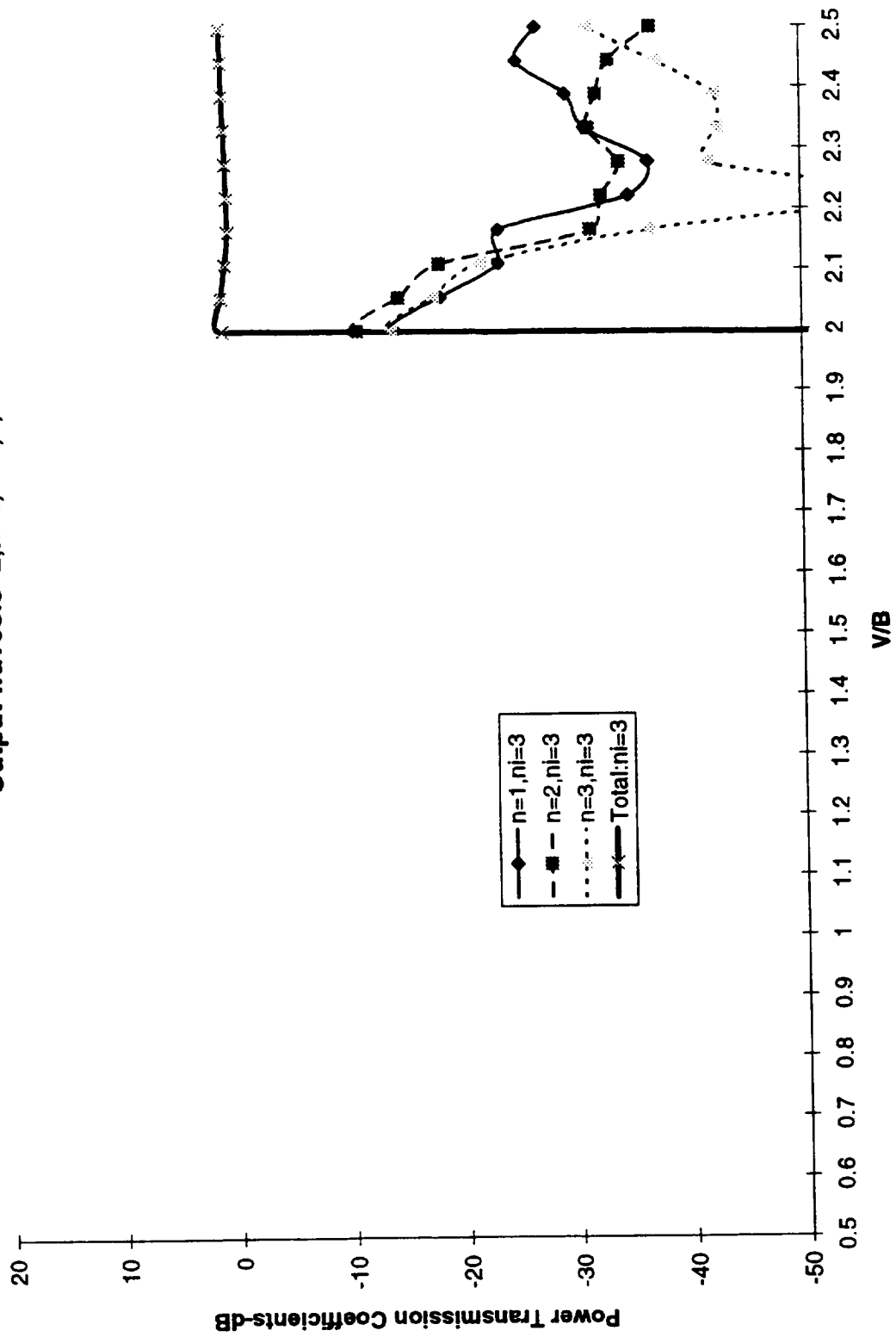
Output waves: $s=1, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

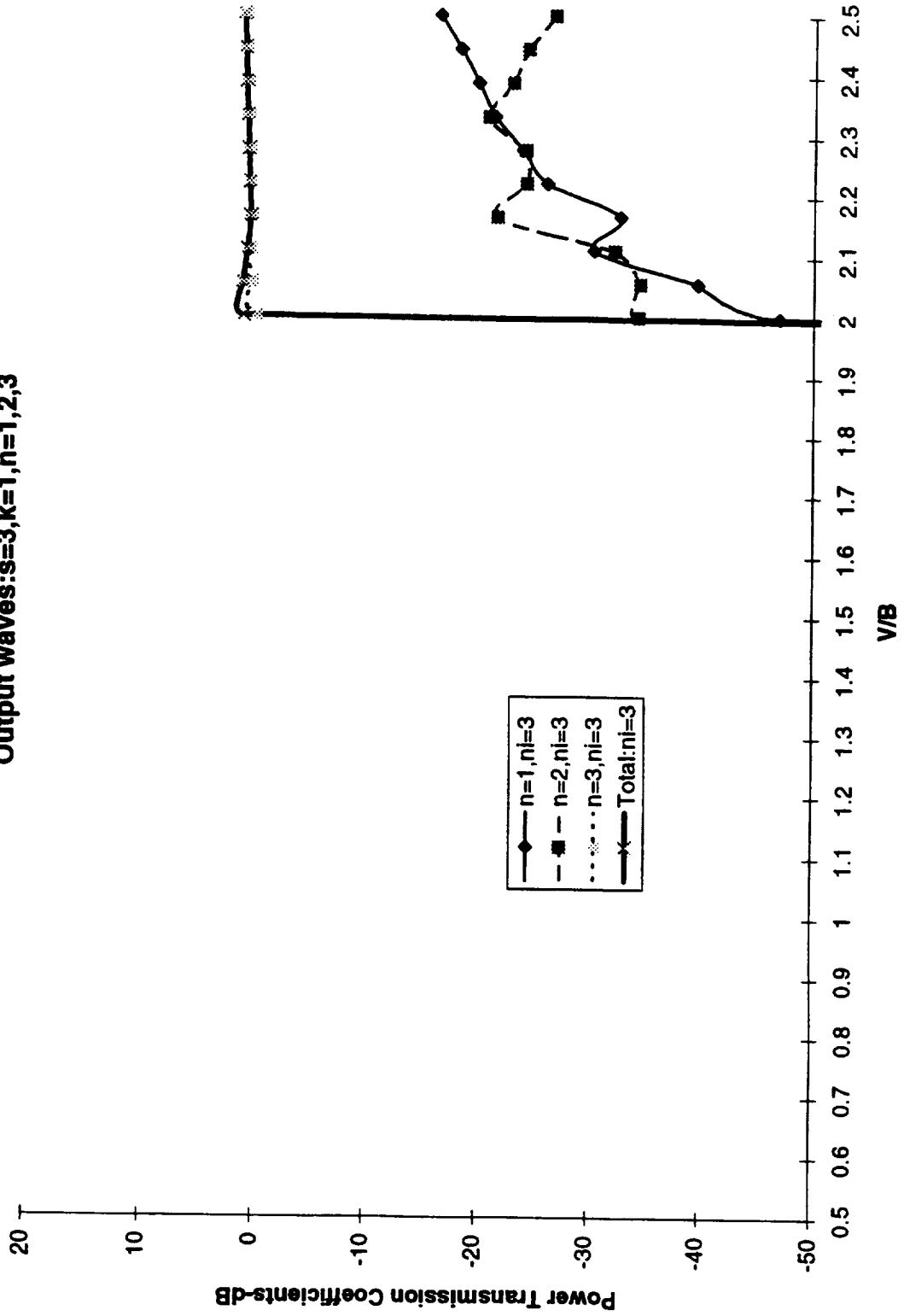
Output waves: $s=2, k=1, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

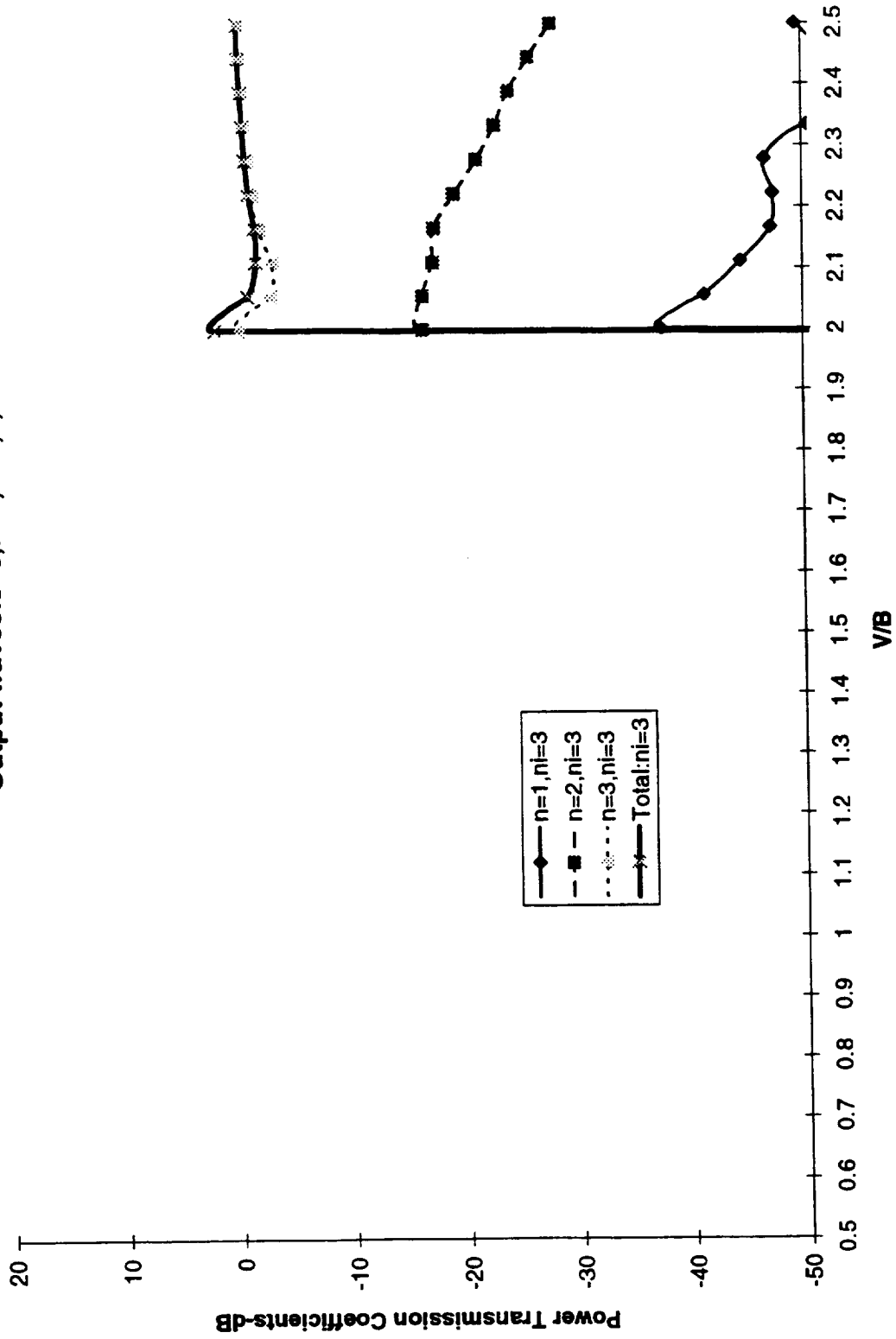
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

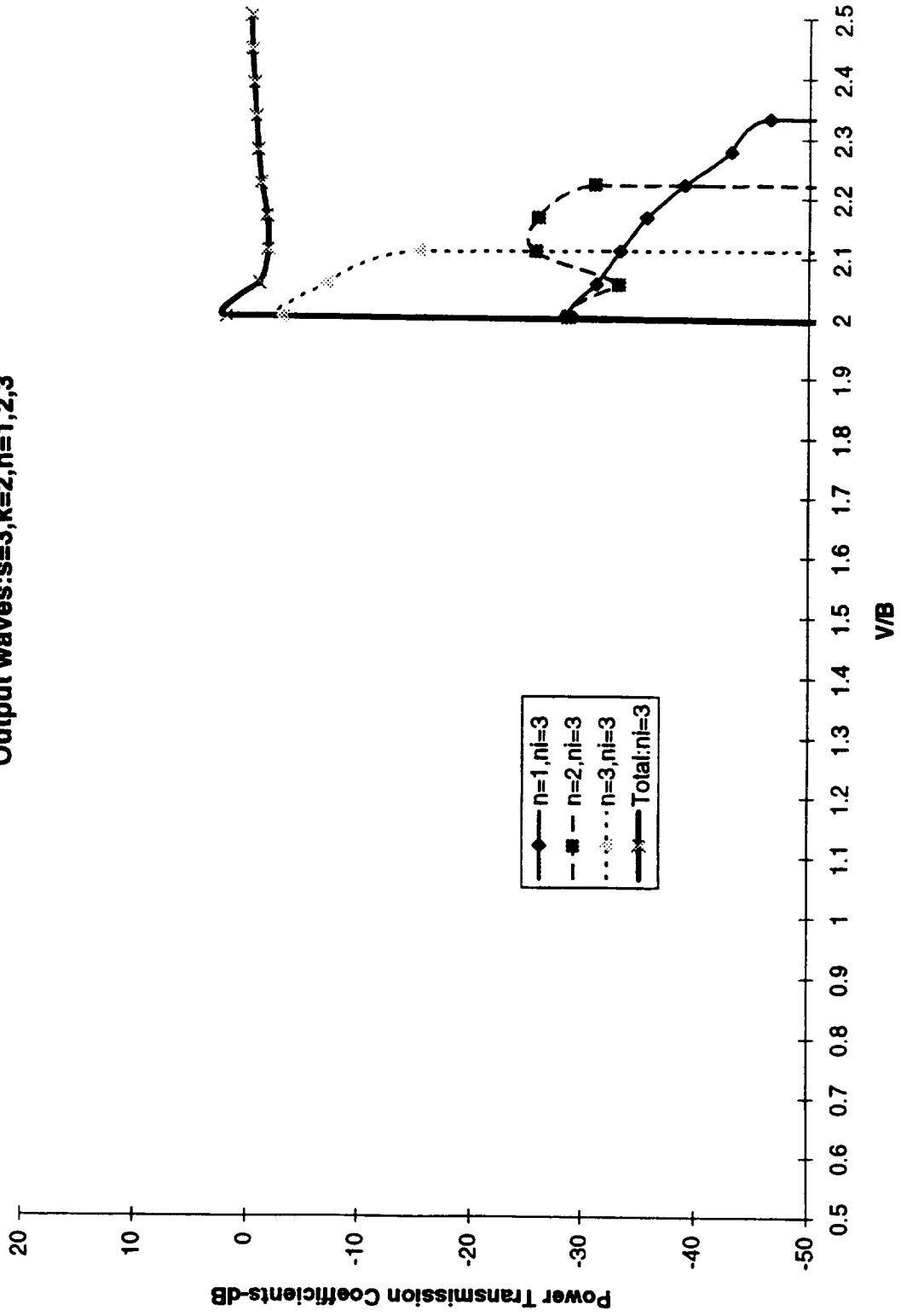
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_l=3, k_l=1, n_l=3$

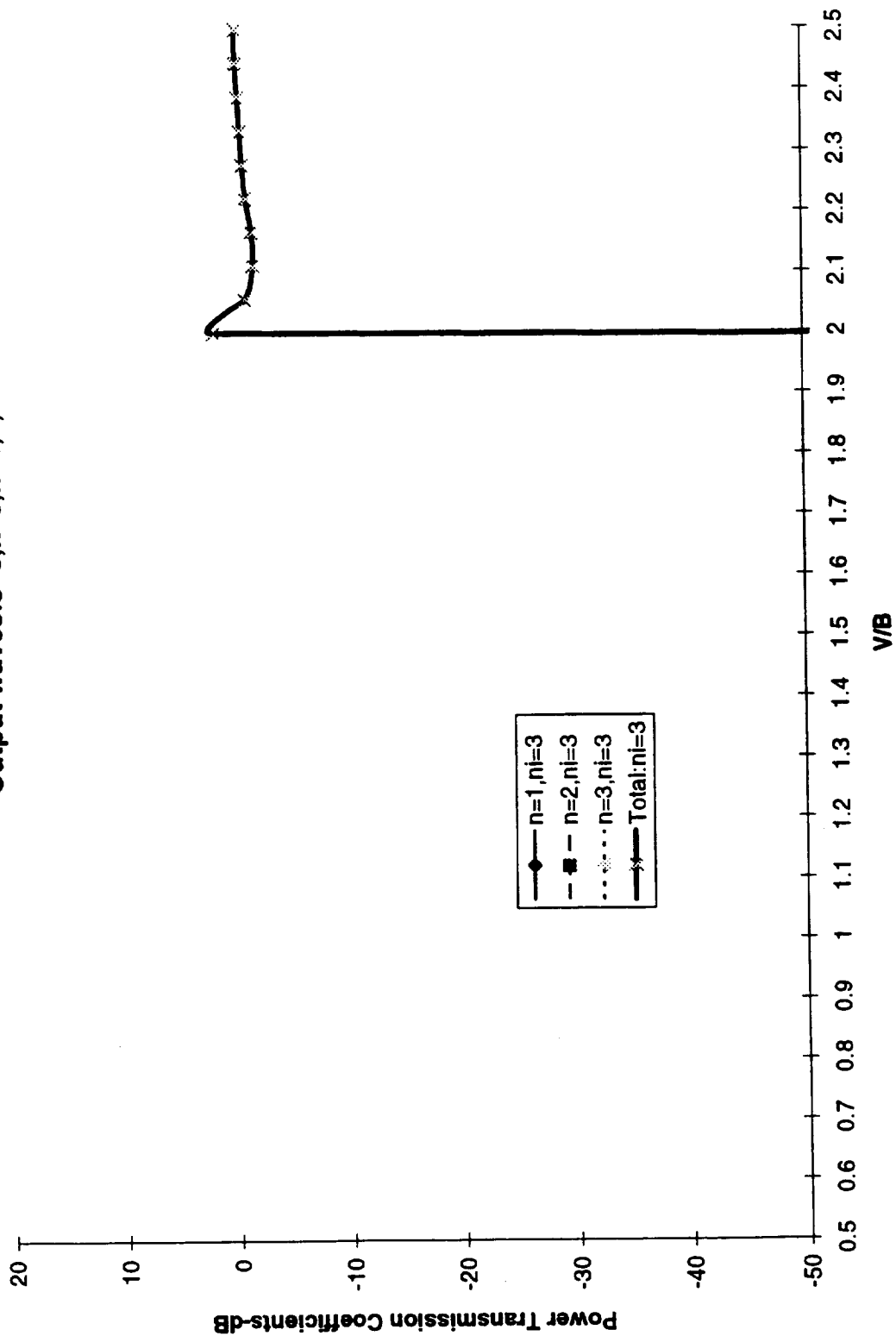
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=1, n_i=3$

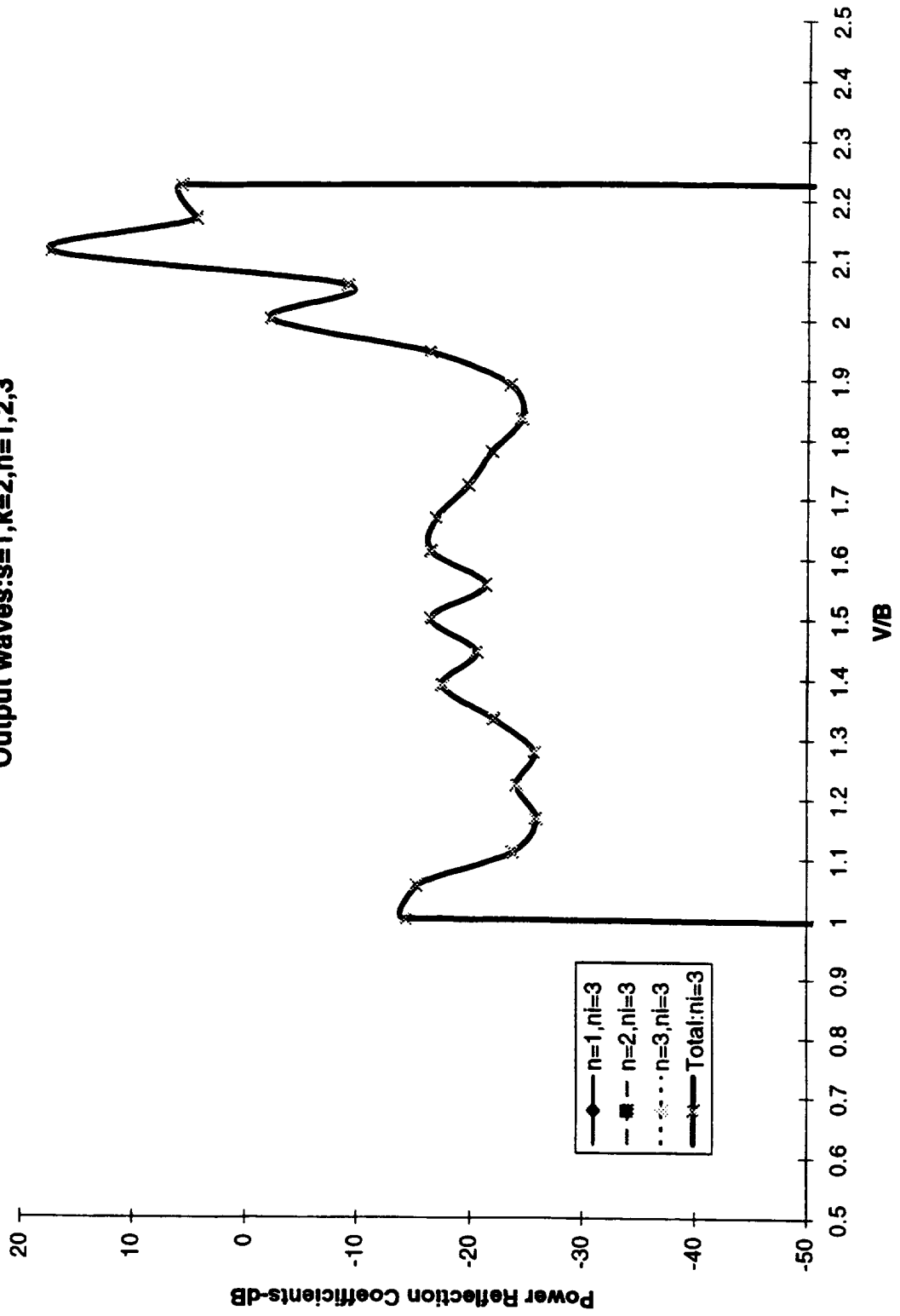
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

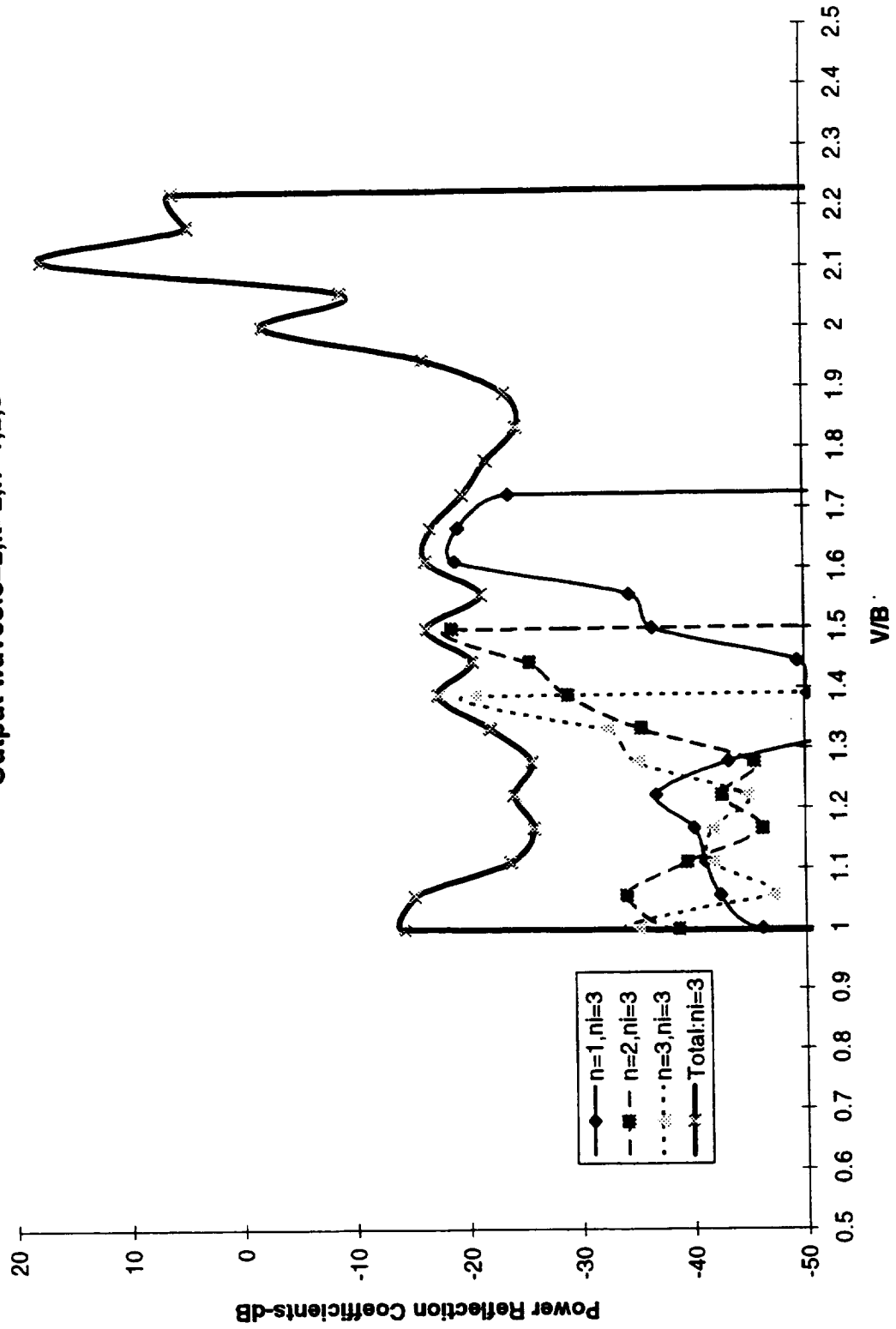
Output wave: $s=1, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

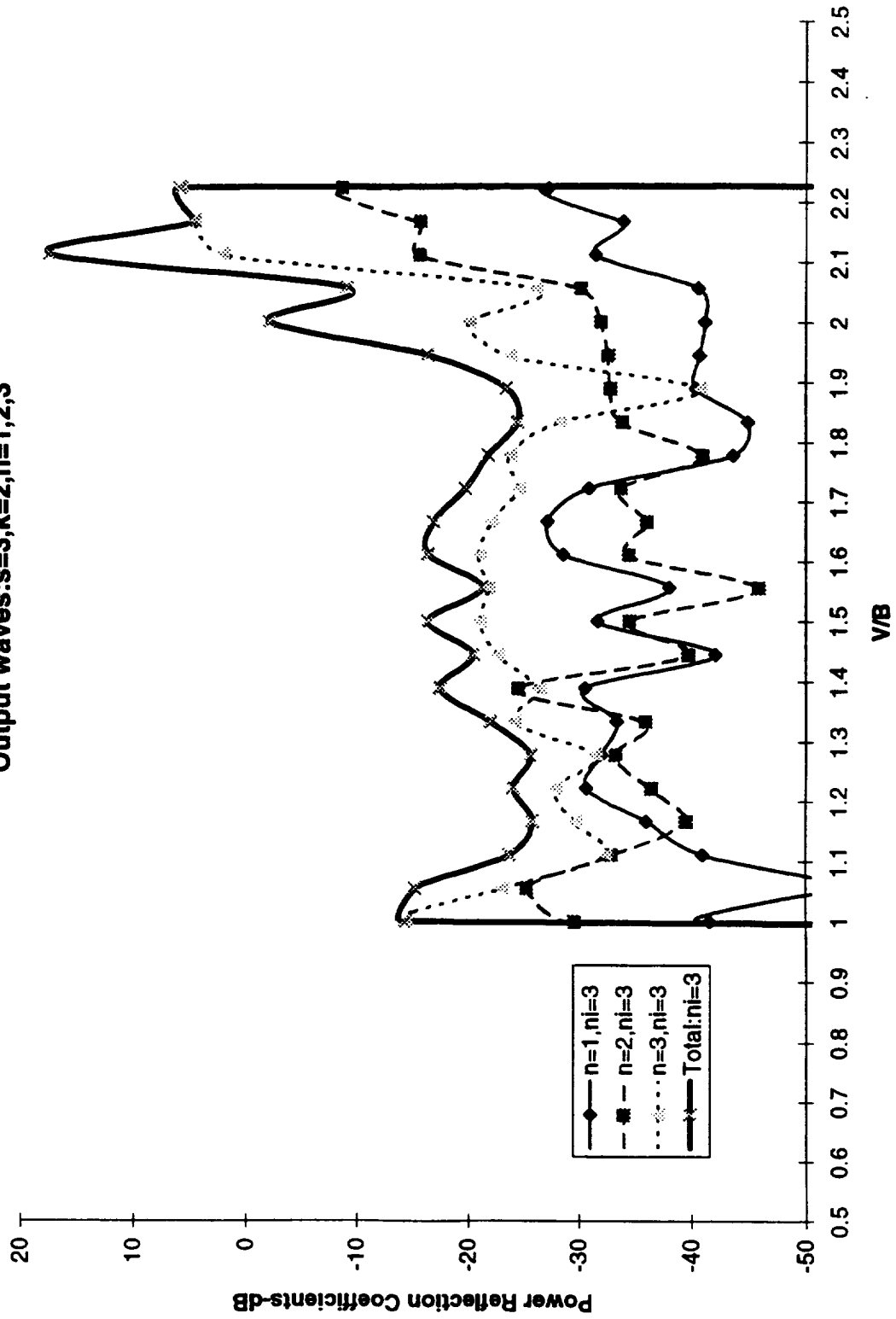
Output waves: $s=2, k=2, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_l=2, n_l=3$

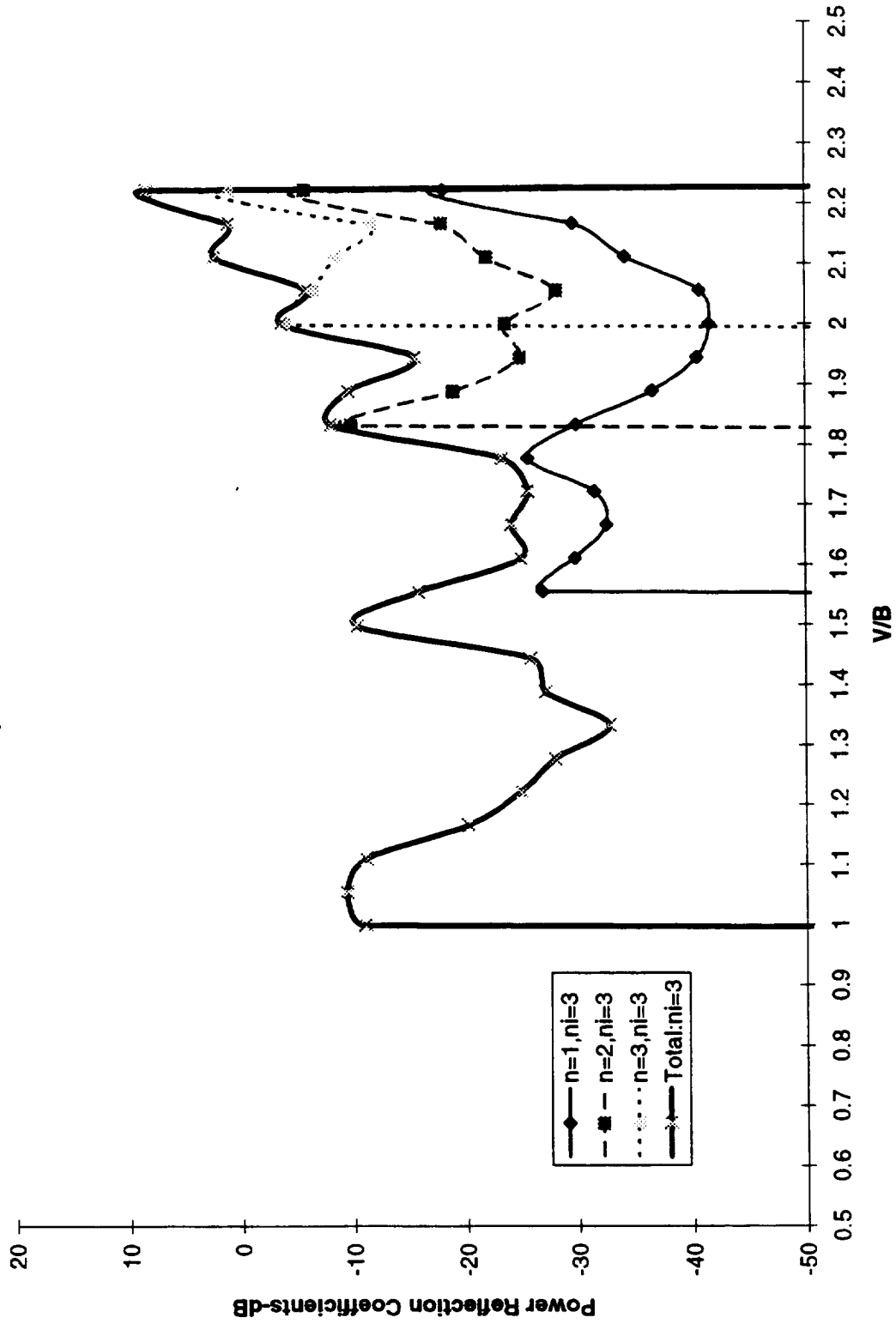
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

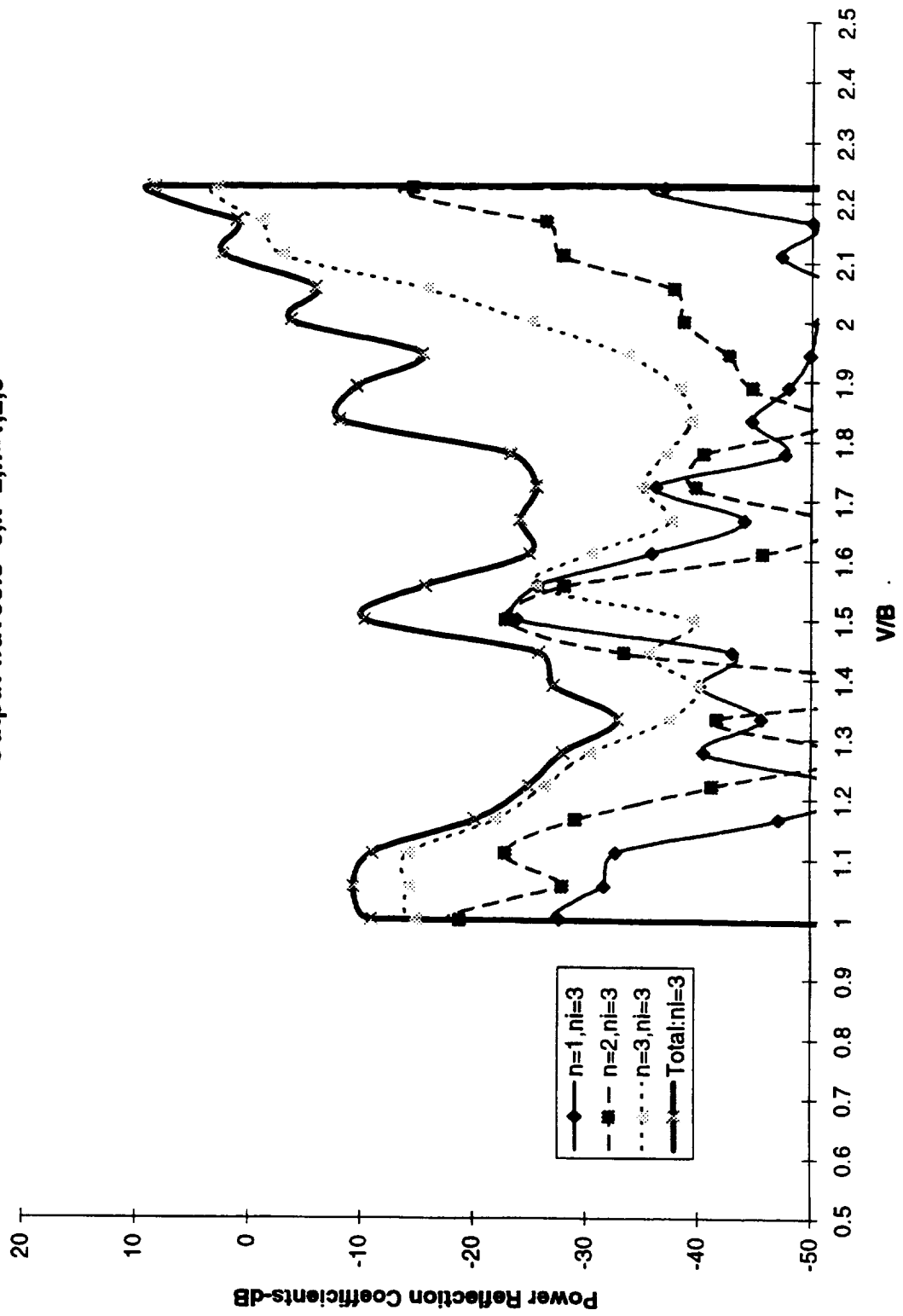
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

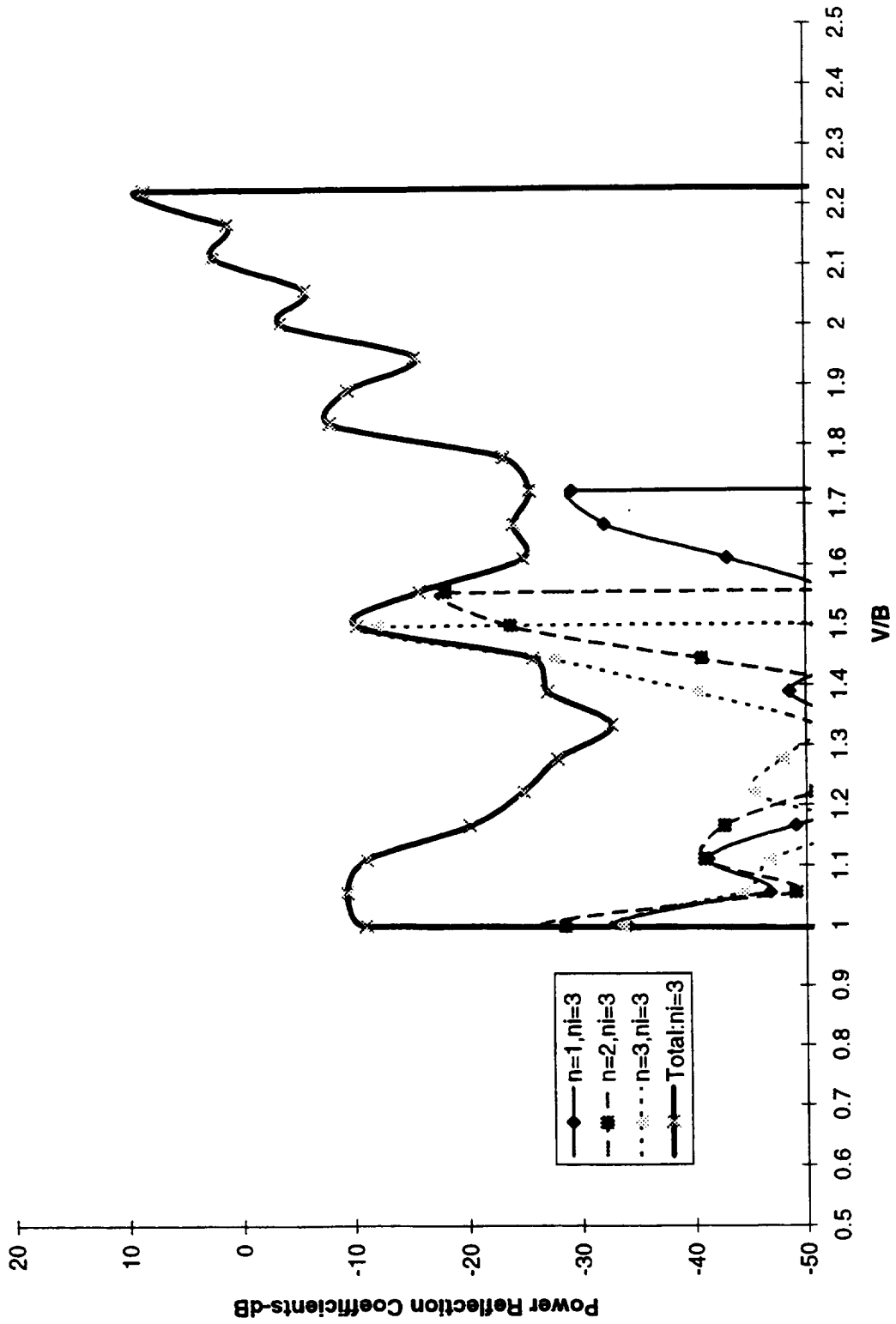
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $sl=3, ki=2, ni=3$

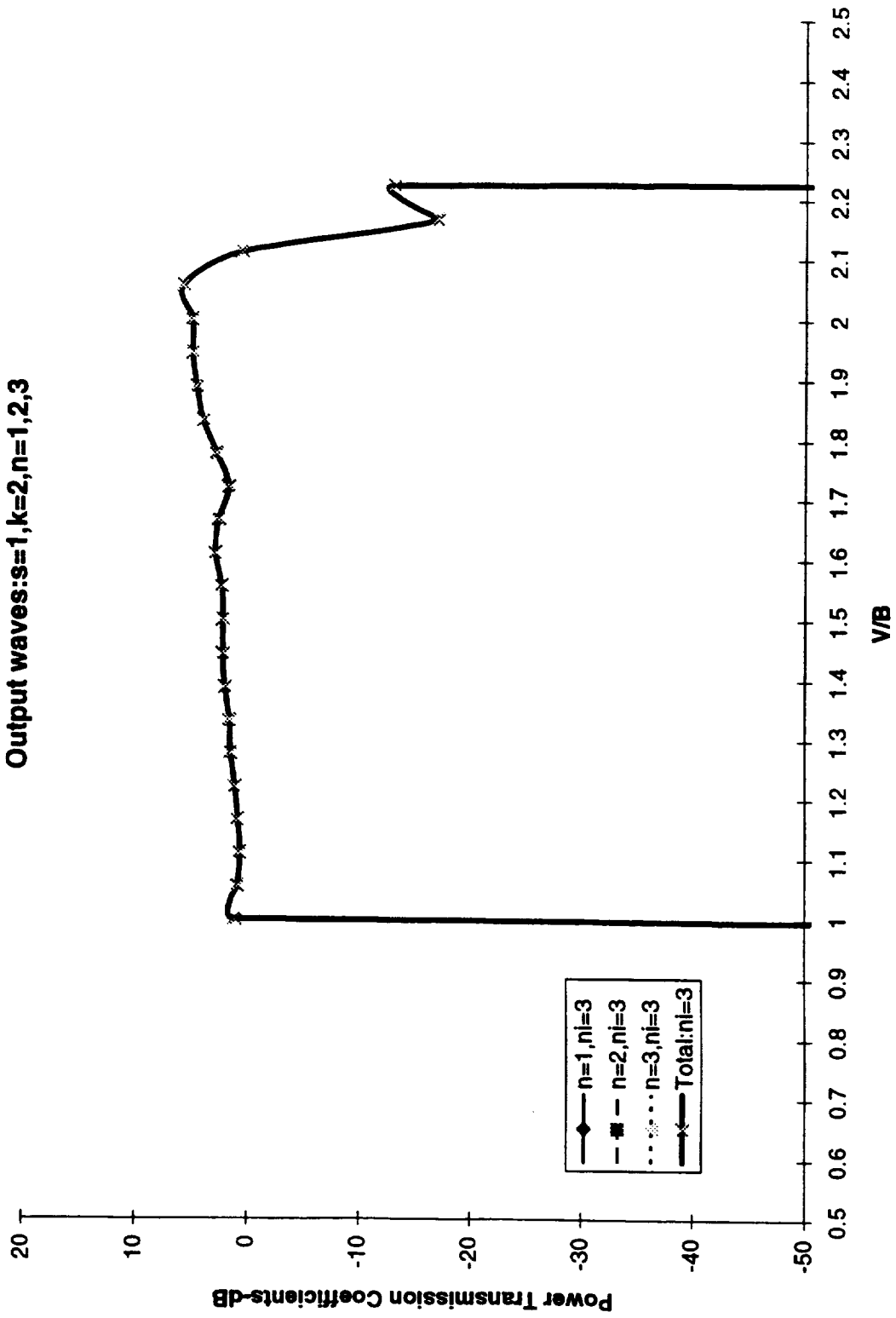
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=3, k_l=2, n_l=3$

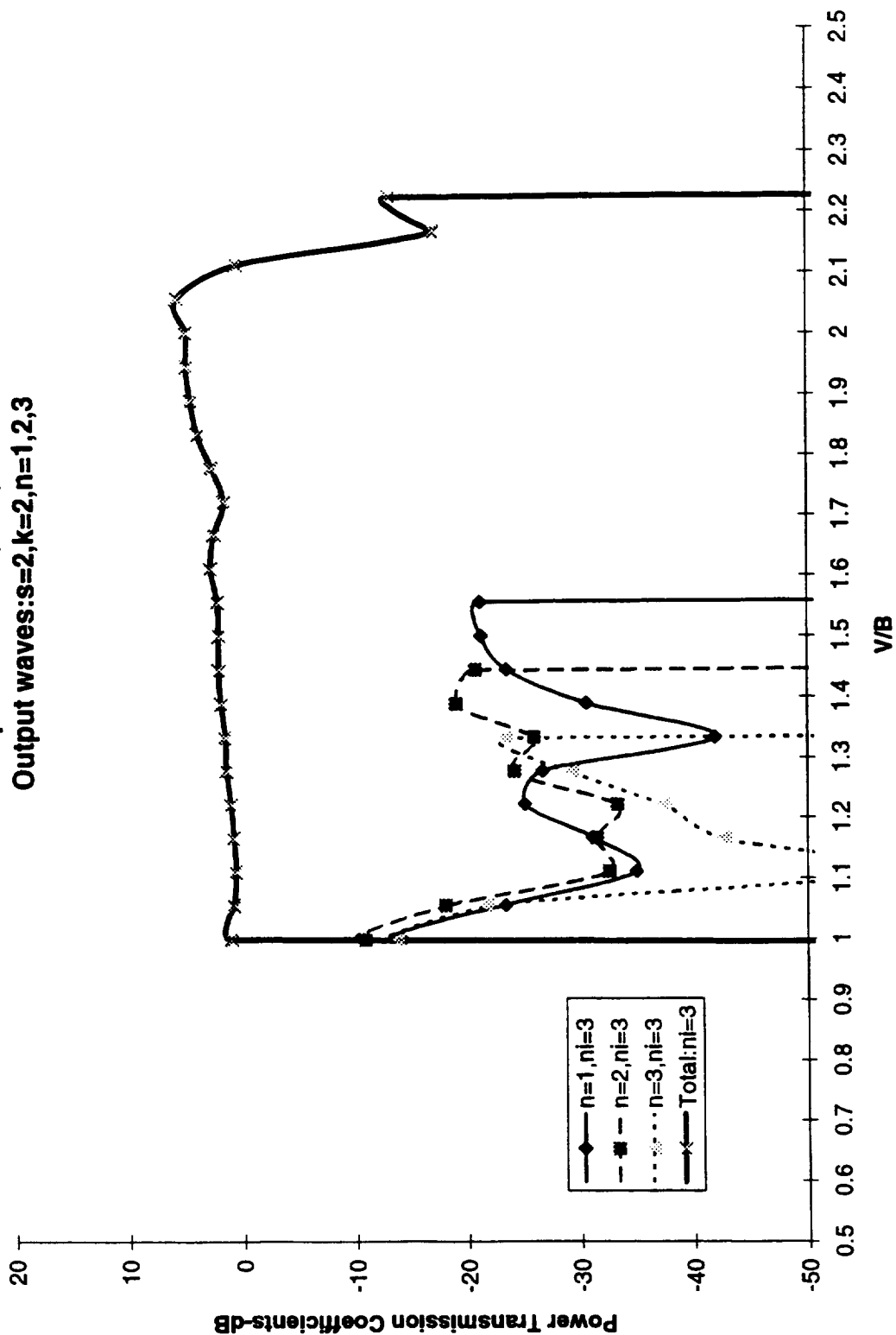
Output waves: $s=1, k=2, n=1, 2, 3$



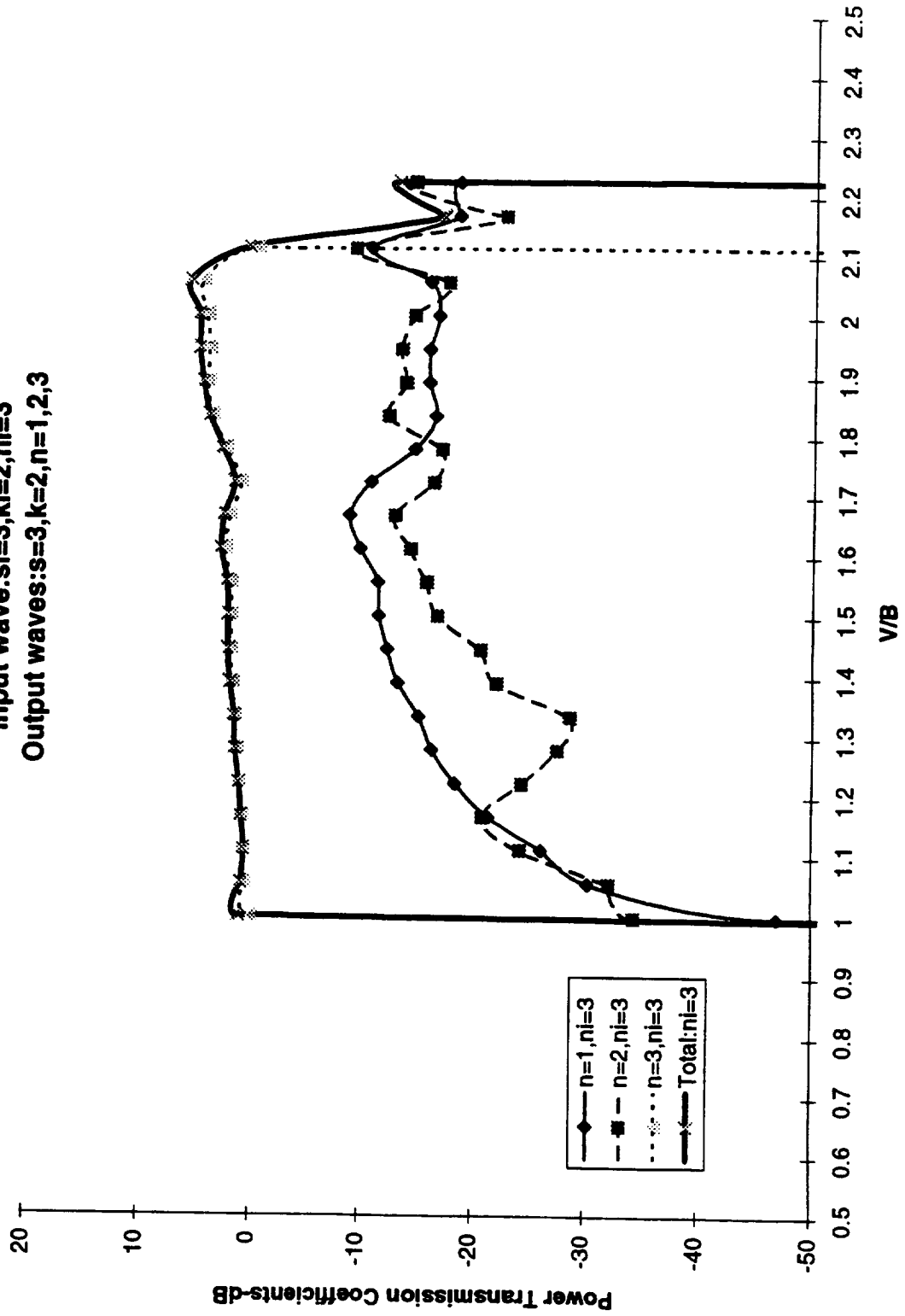
Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

Output waves: $s=2, k=2, n=1, 2, 3$



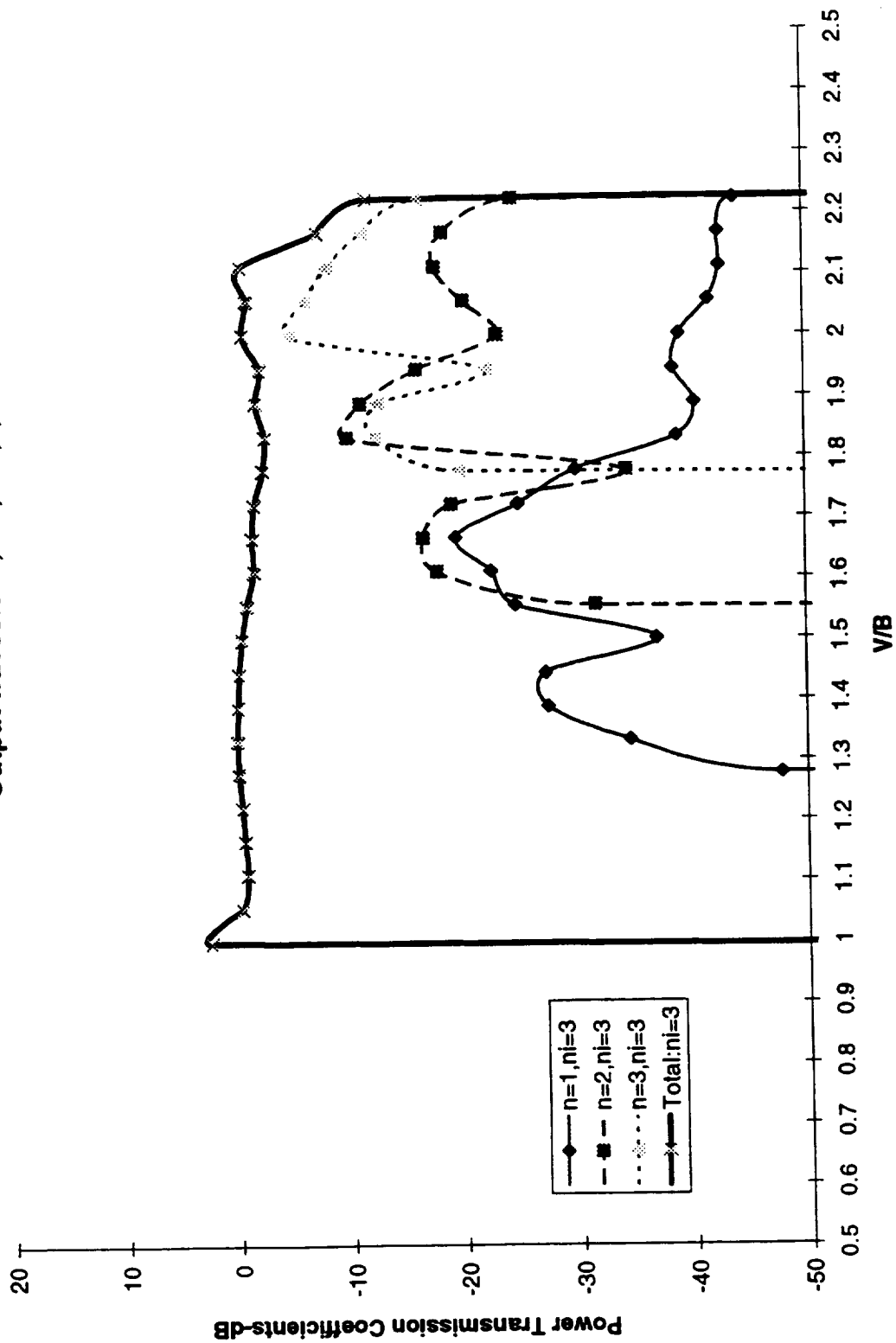
Rotor Transmission-Mid Speed Case
Input wave: $s_i=3, k_i=2, n_i=3$
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

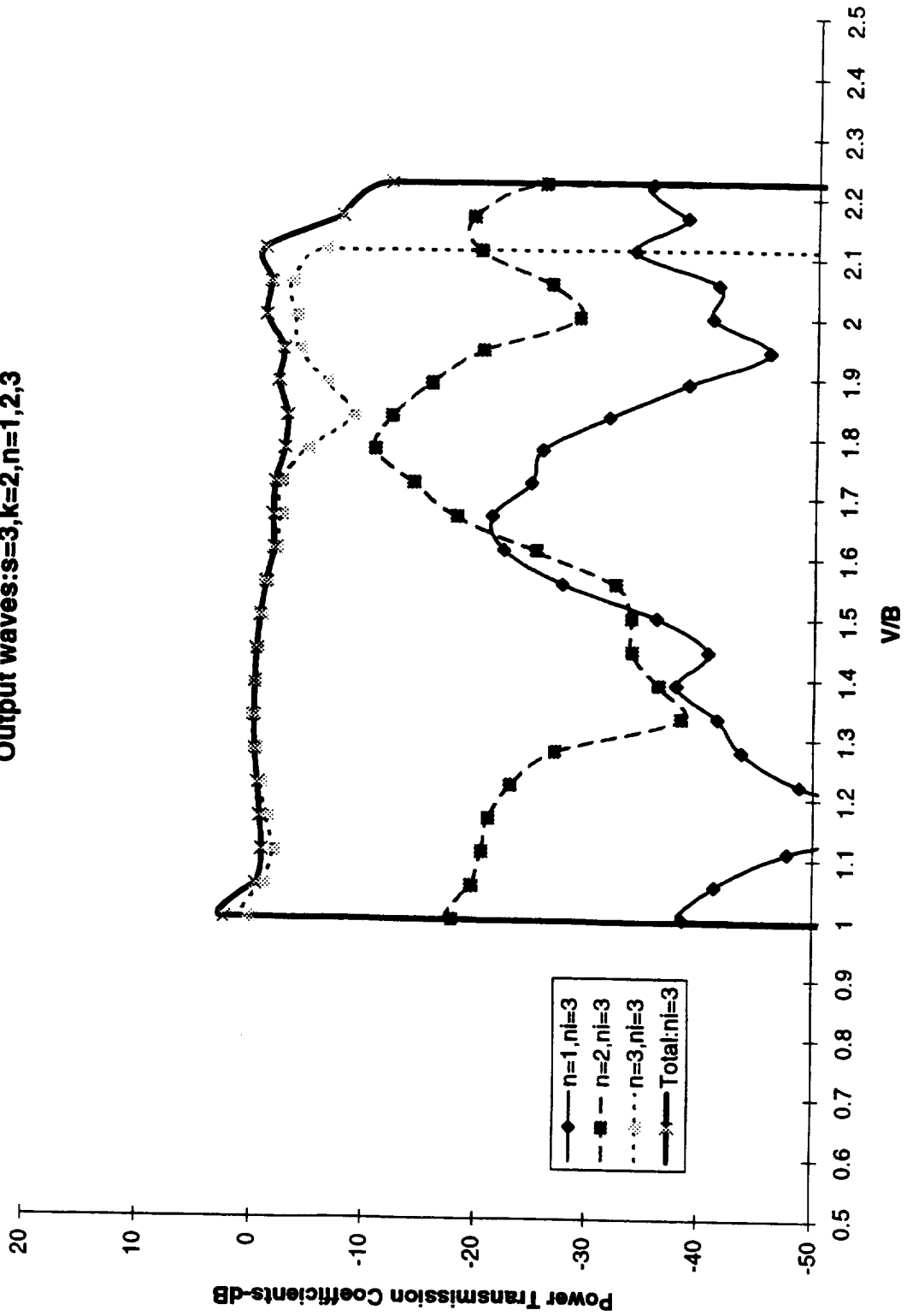
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_l=3, k_l=2, n_l=3$

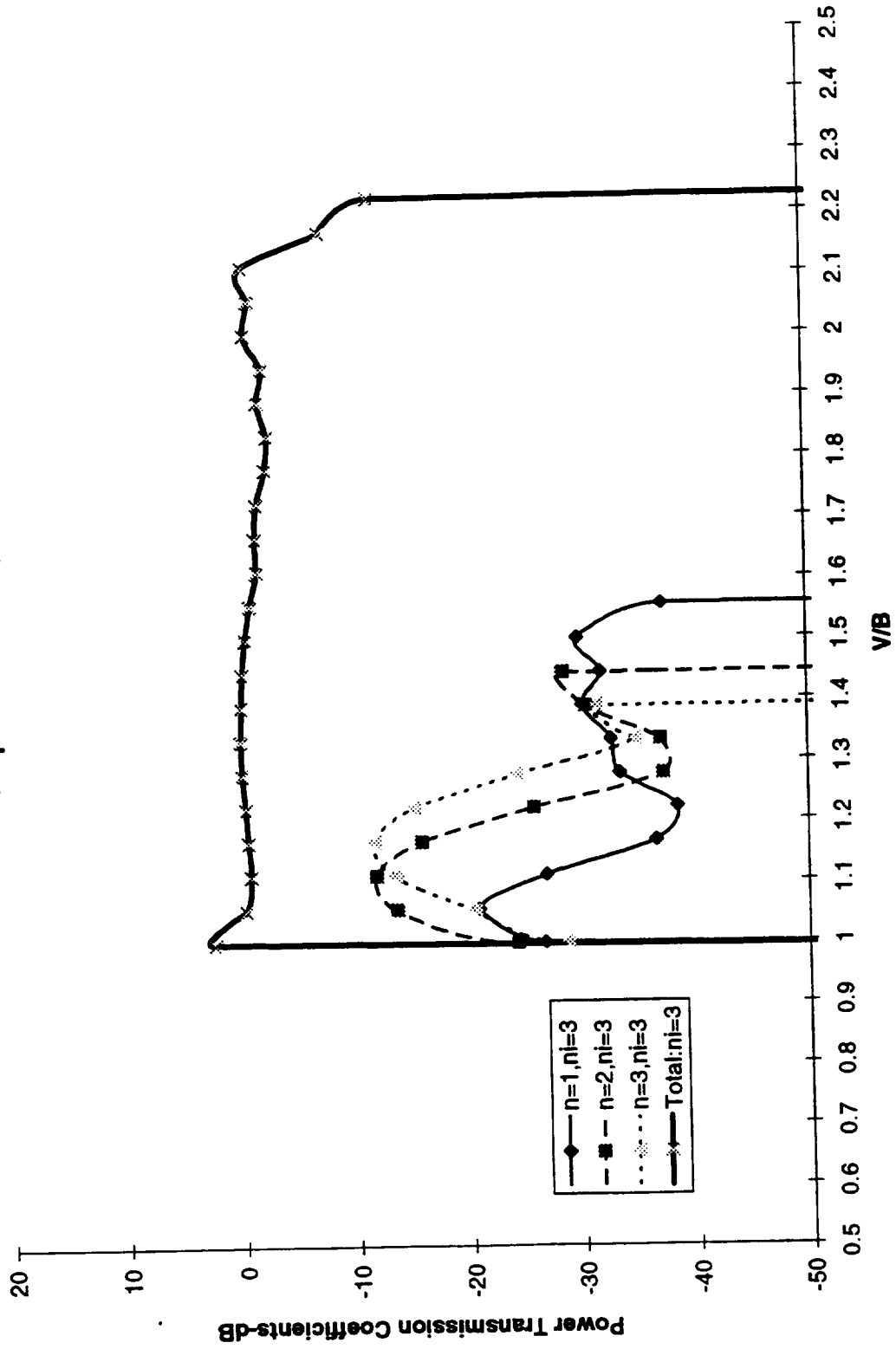
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=2, n_i=3$

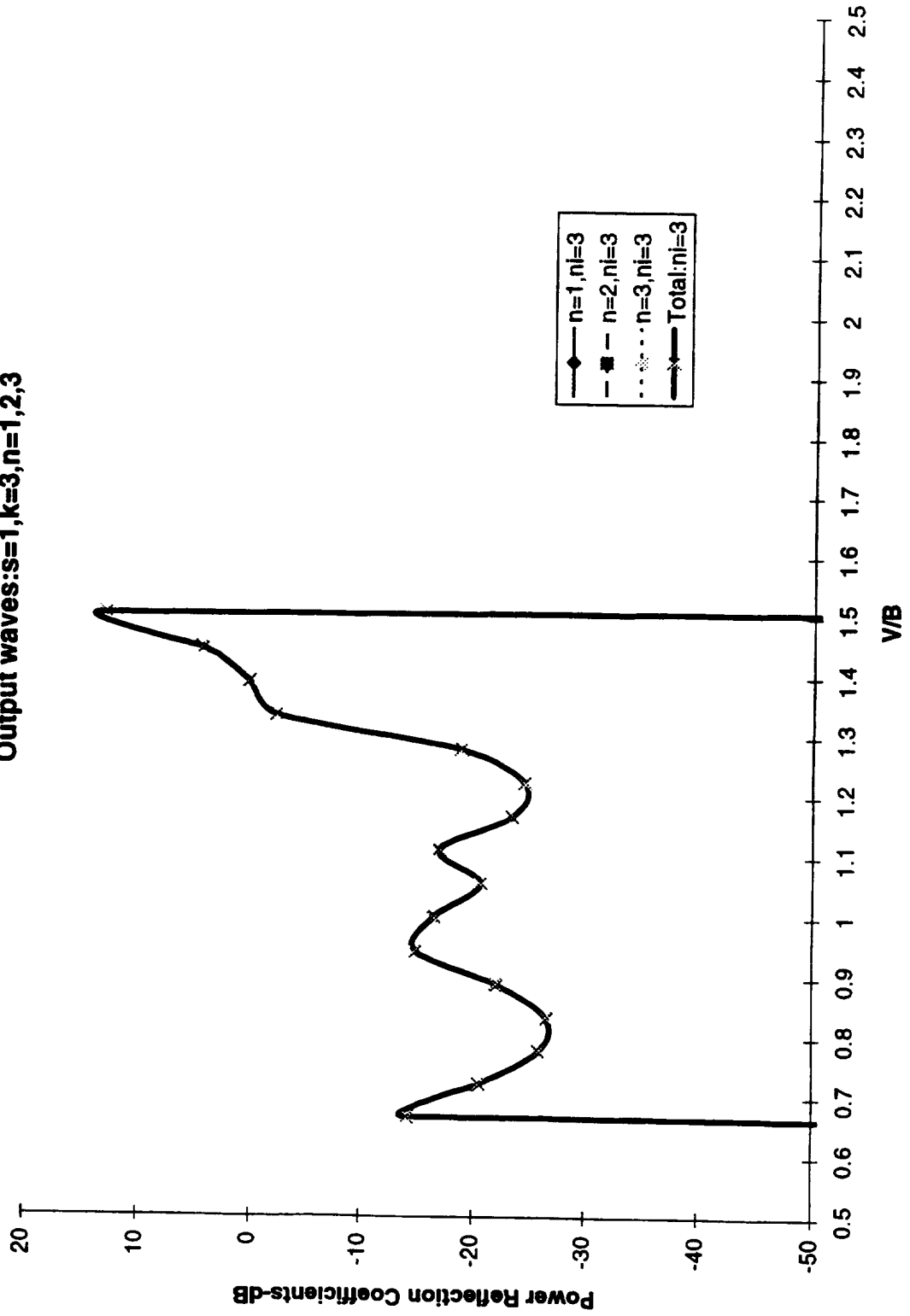
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

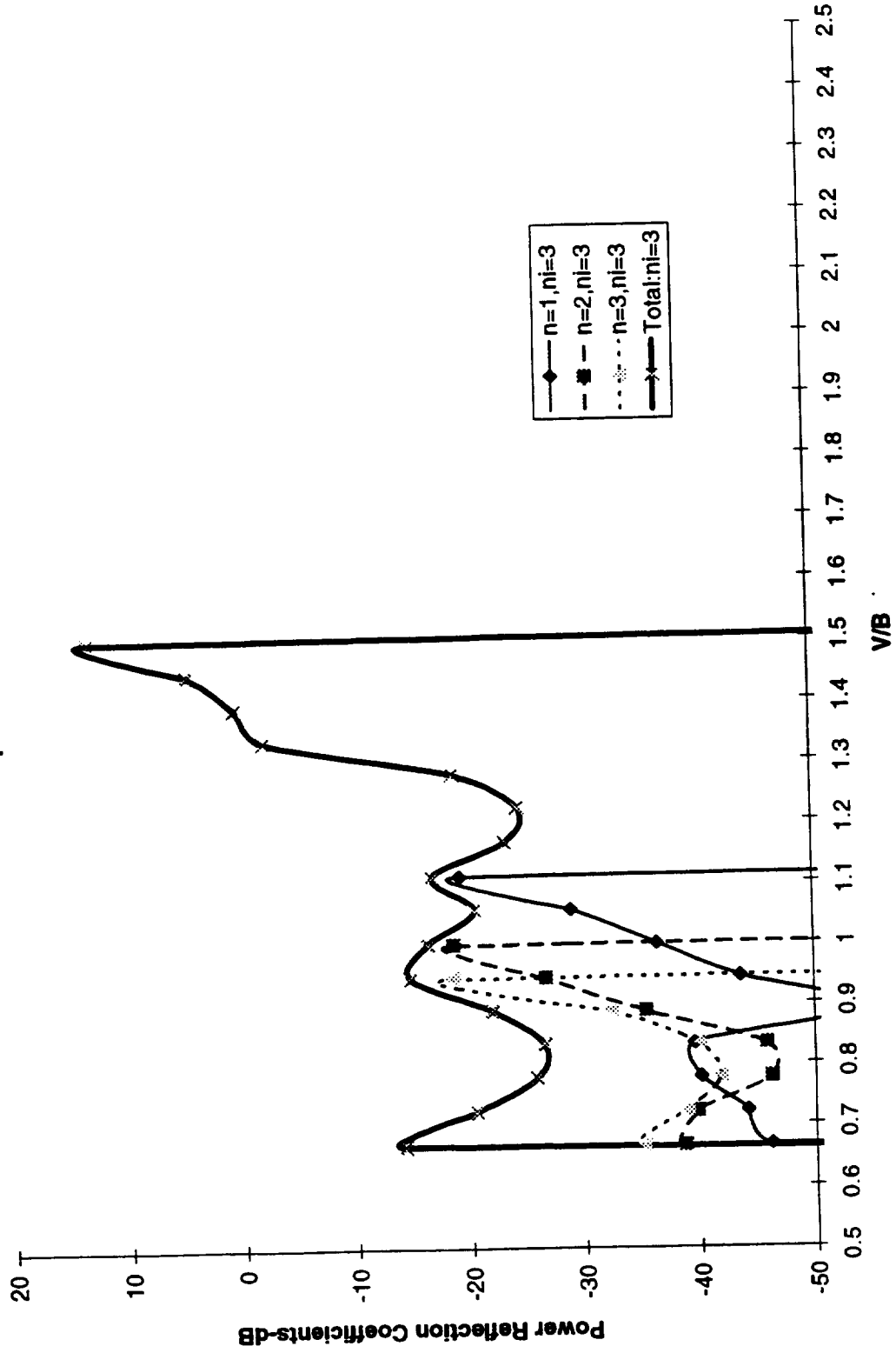
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

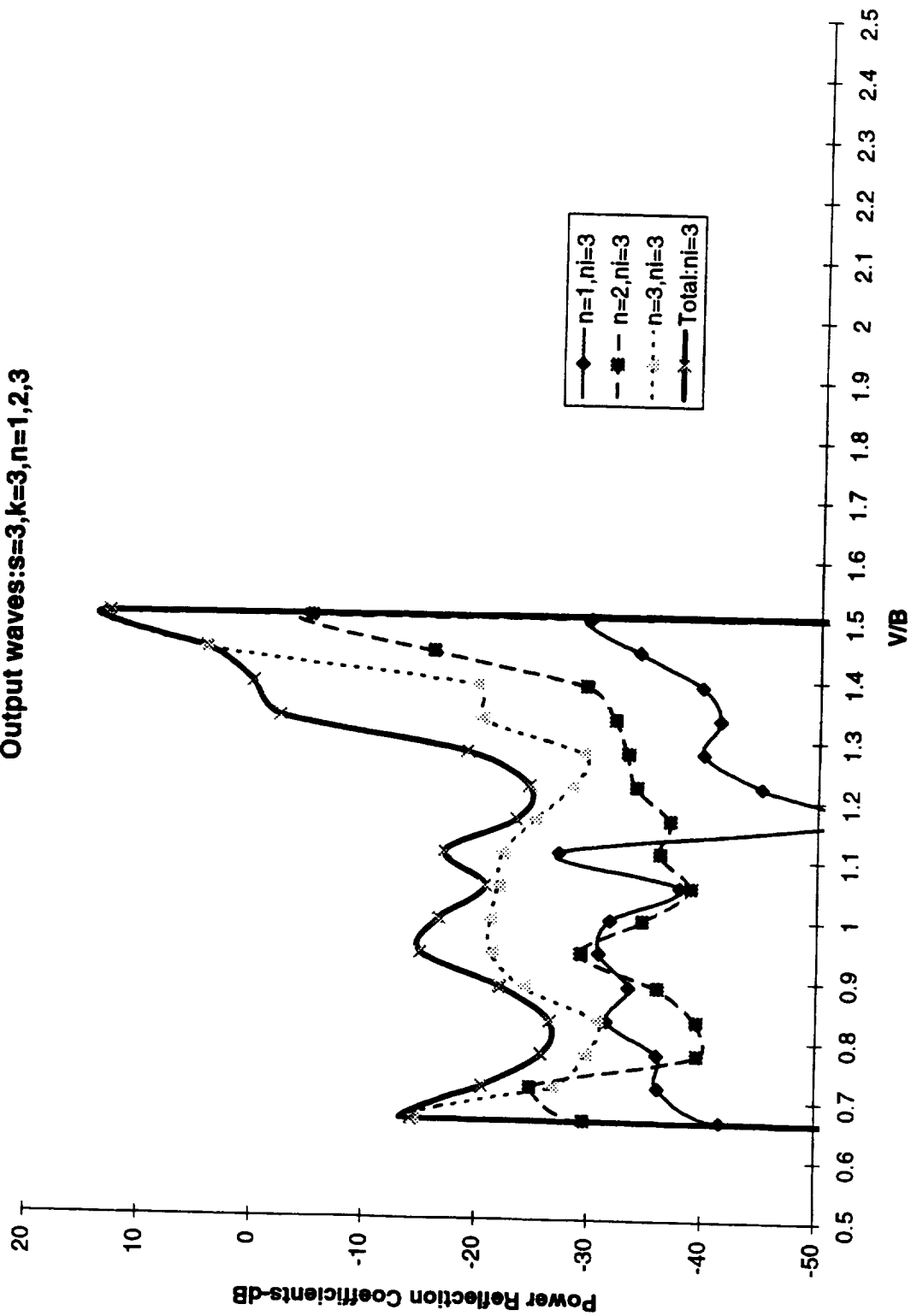
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

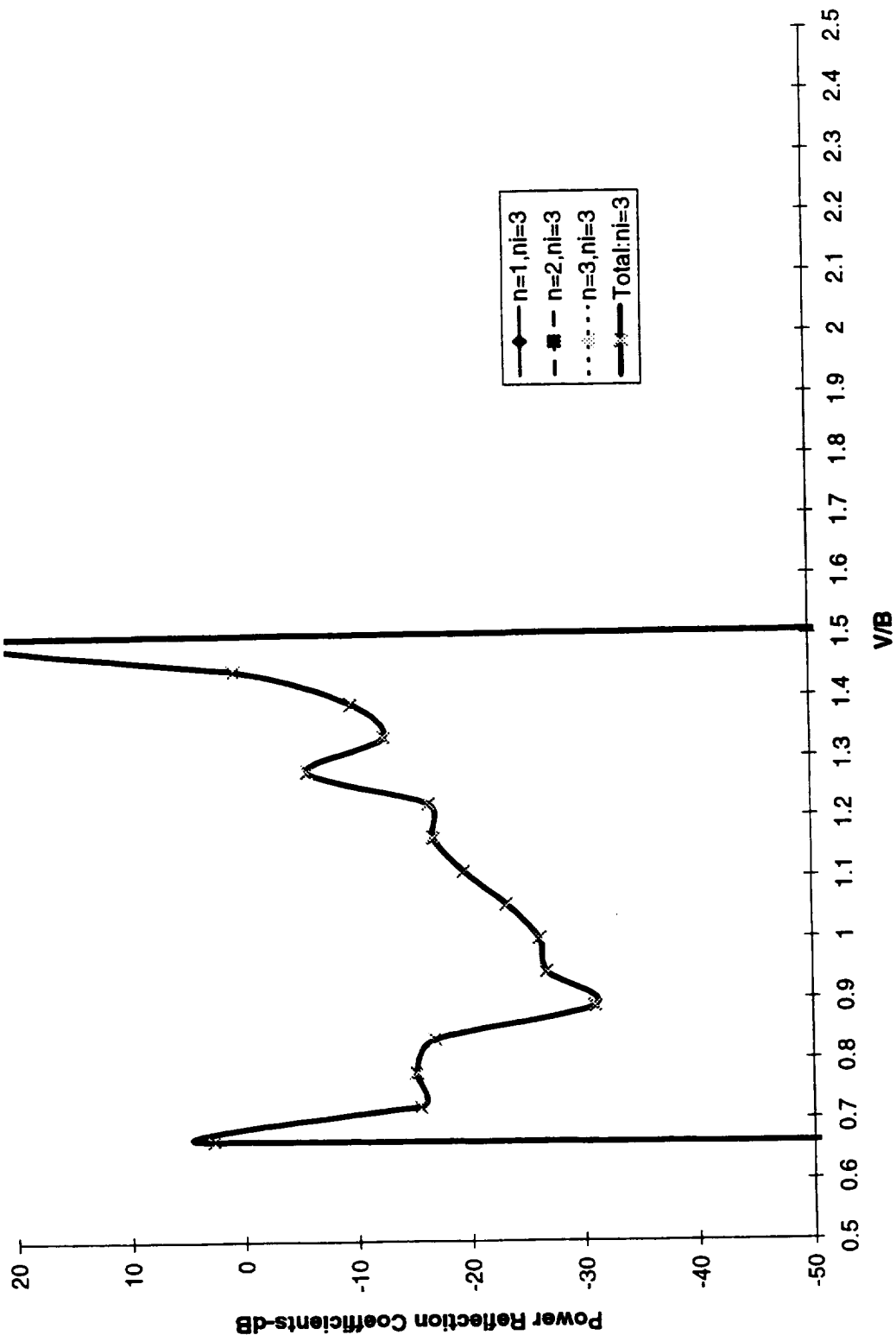
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

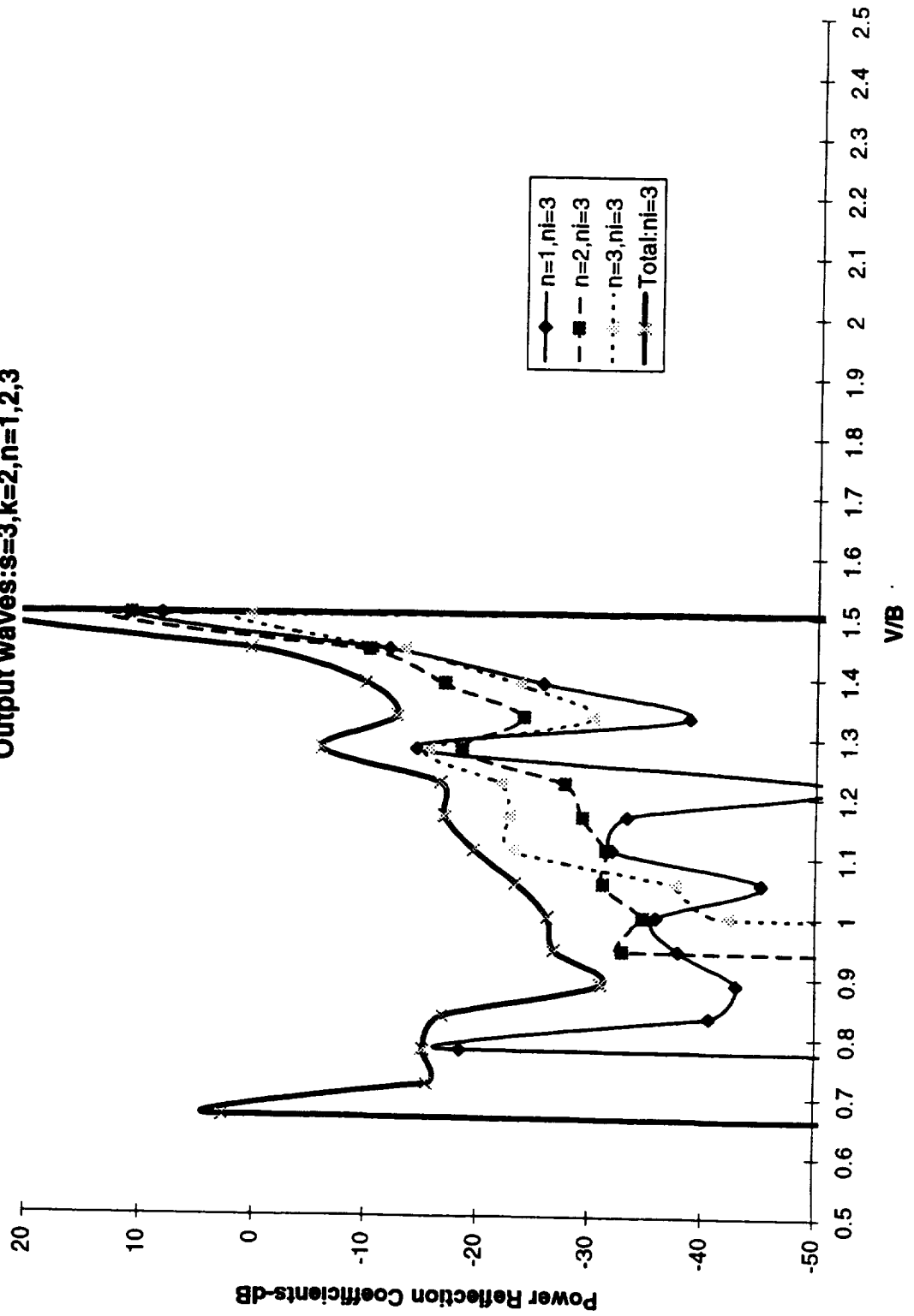
Output wave: $s=3, k=1, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

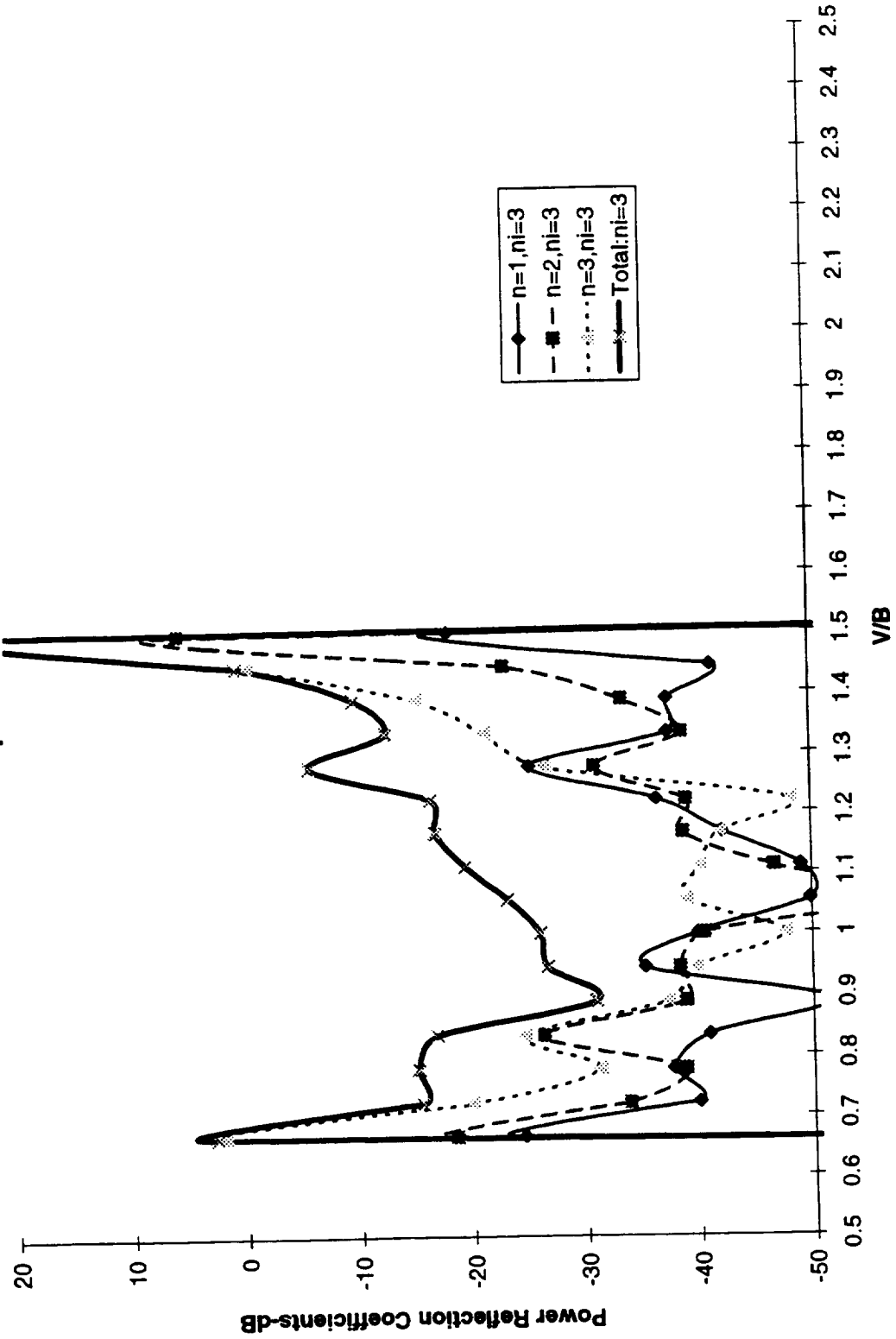
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Reflection-Mid Speed Case

Input wave: $s_i=3, k_l=3, n_i=3$

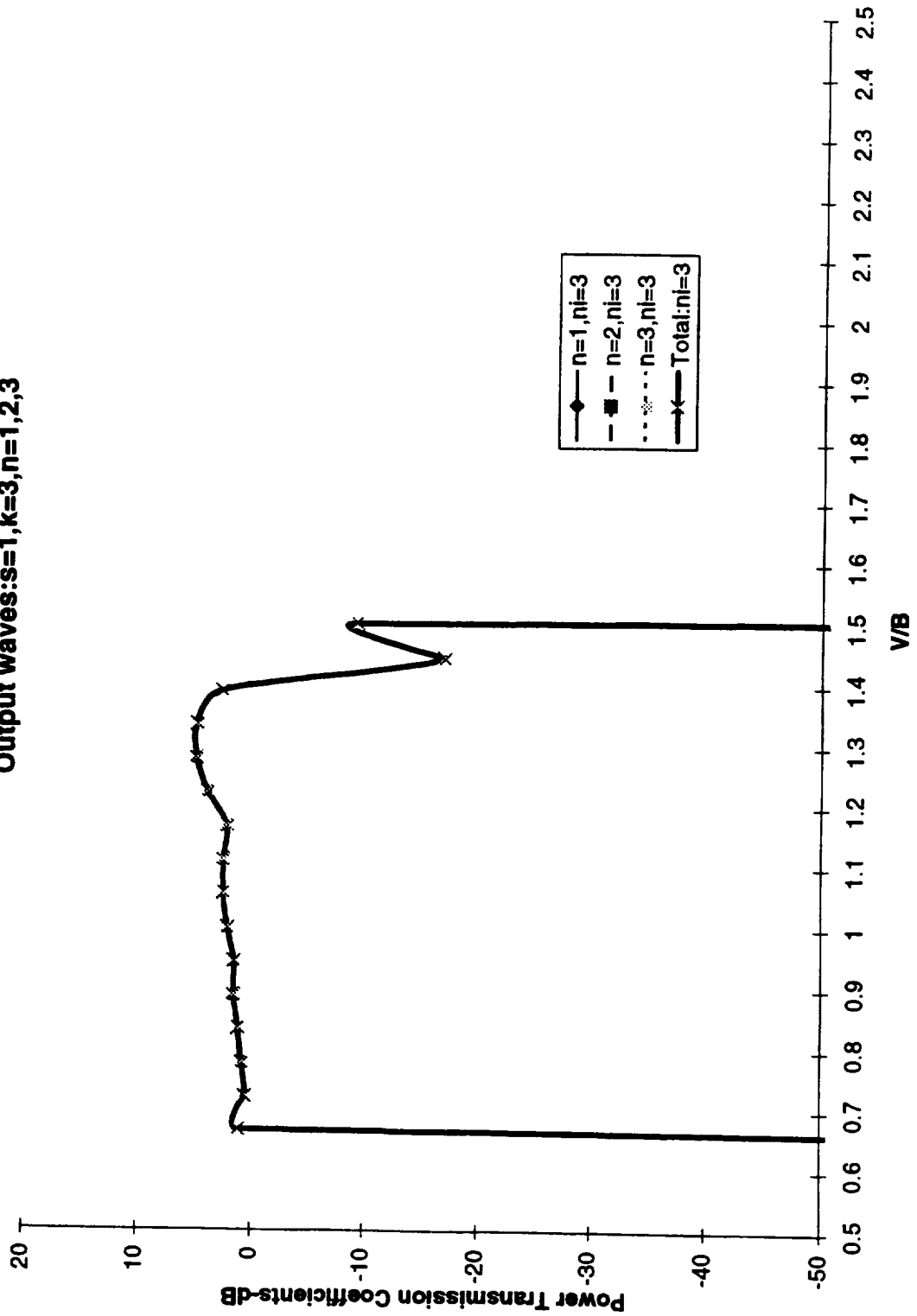
Output waves: $s=3, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $sl=3, kl=3, nl=3$

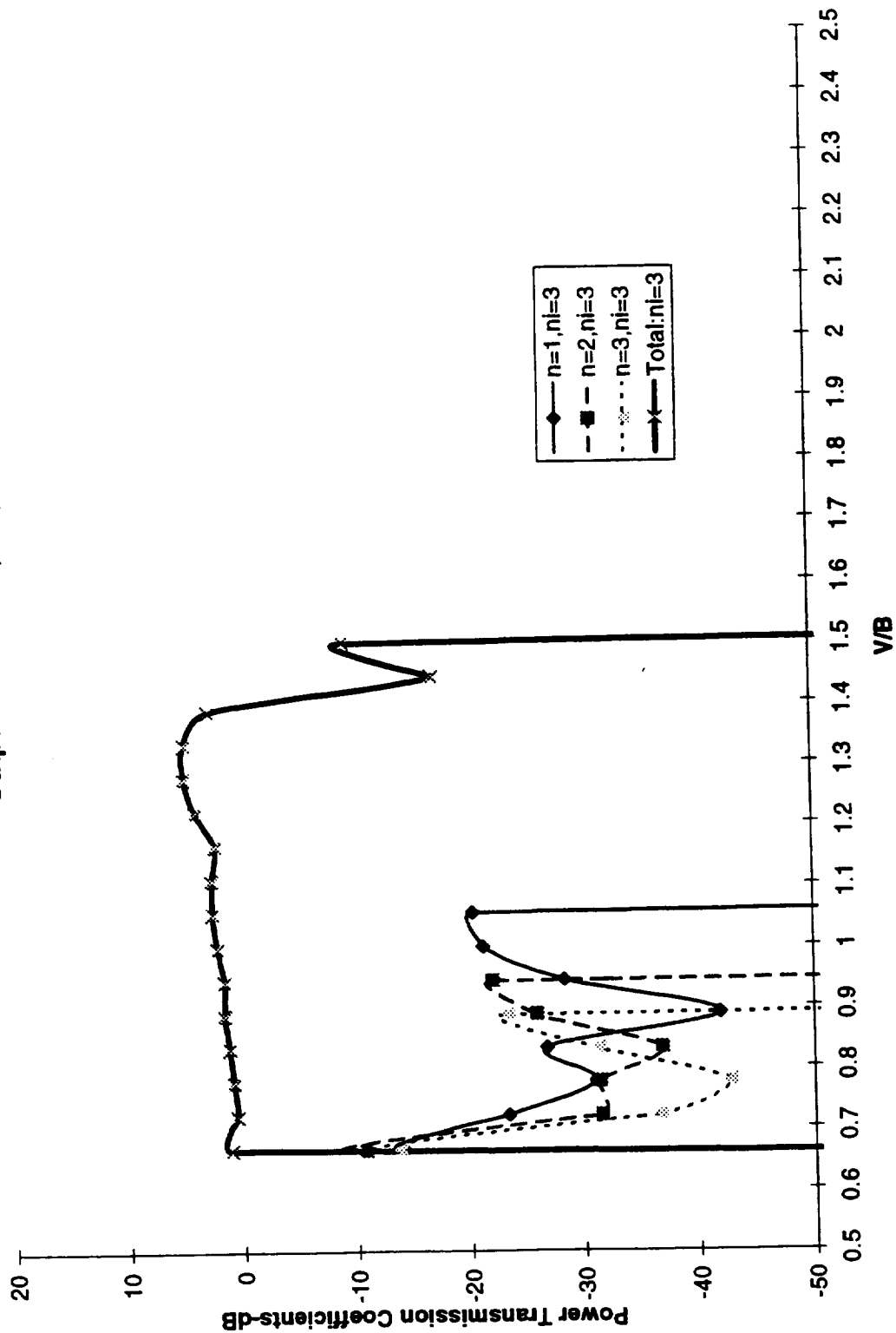
Output waves: $s=1, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_l=3, k_l=3, n_l=3$

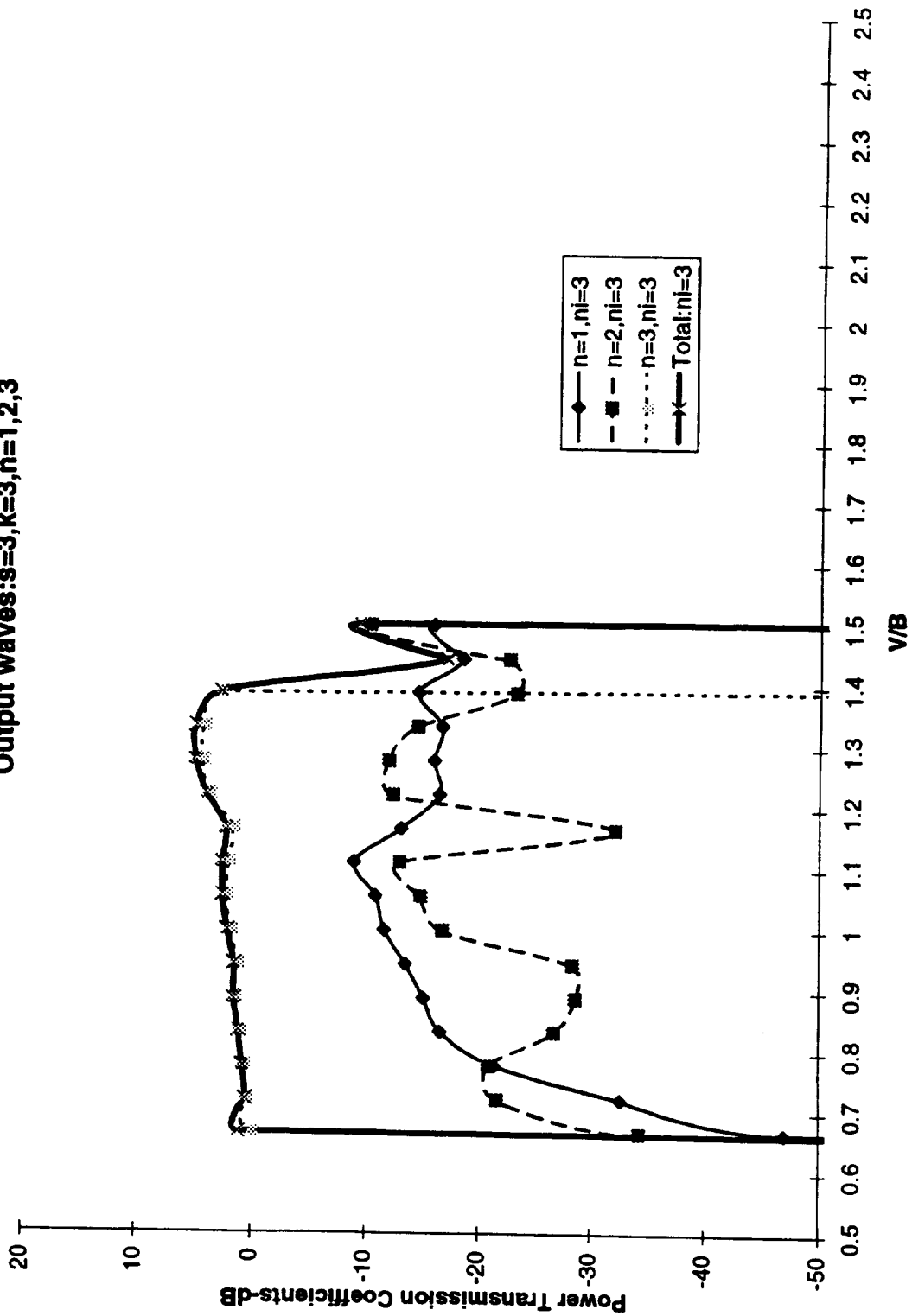
Output waves: $s=2, k=3, n=1, 2, 3$



Rotor Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

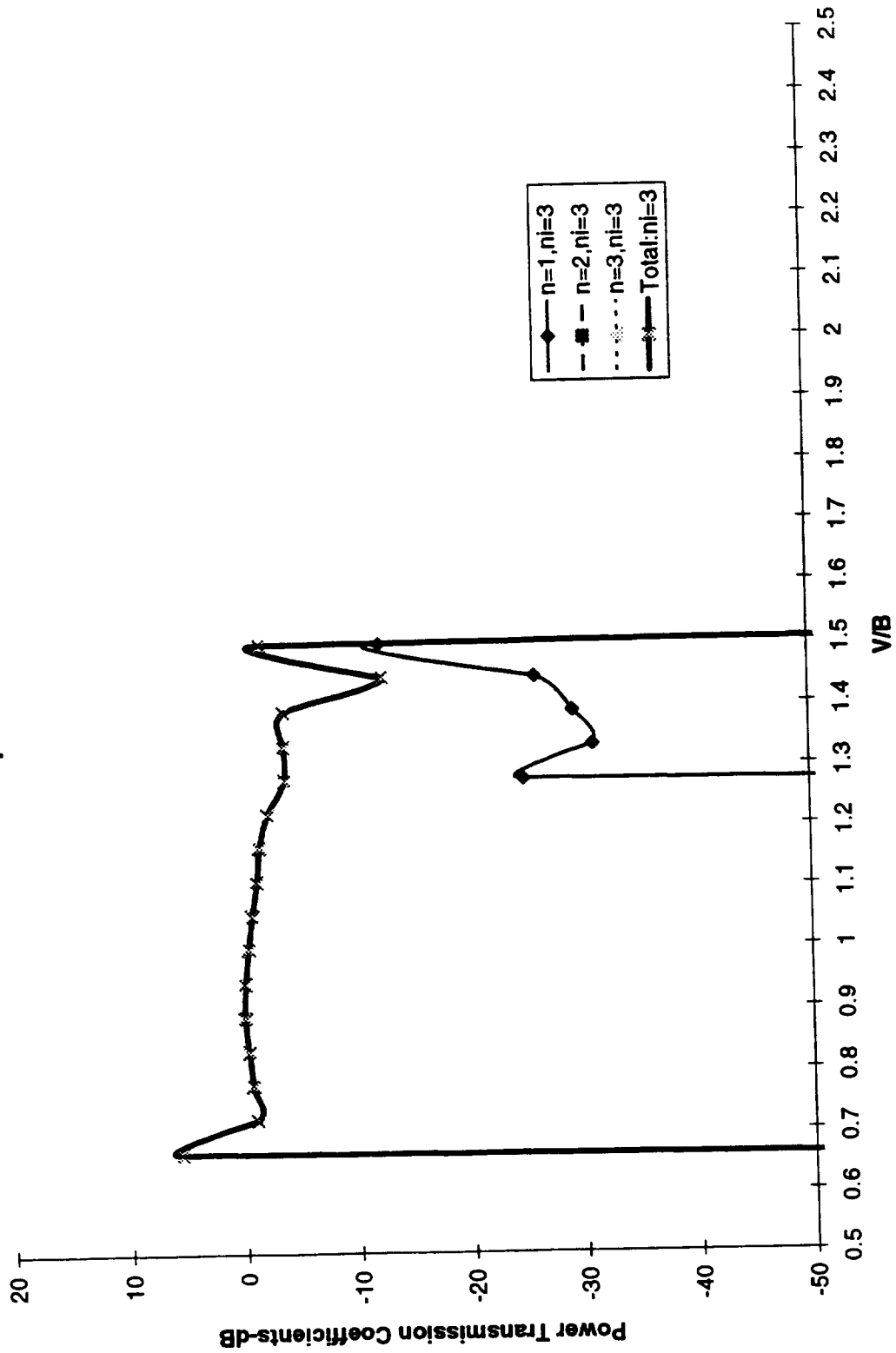
Output waves: $s=3, k=3, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_l=3, k_l=3, n_l=3$

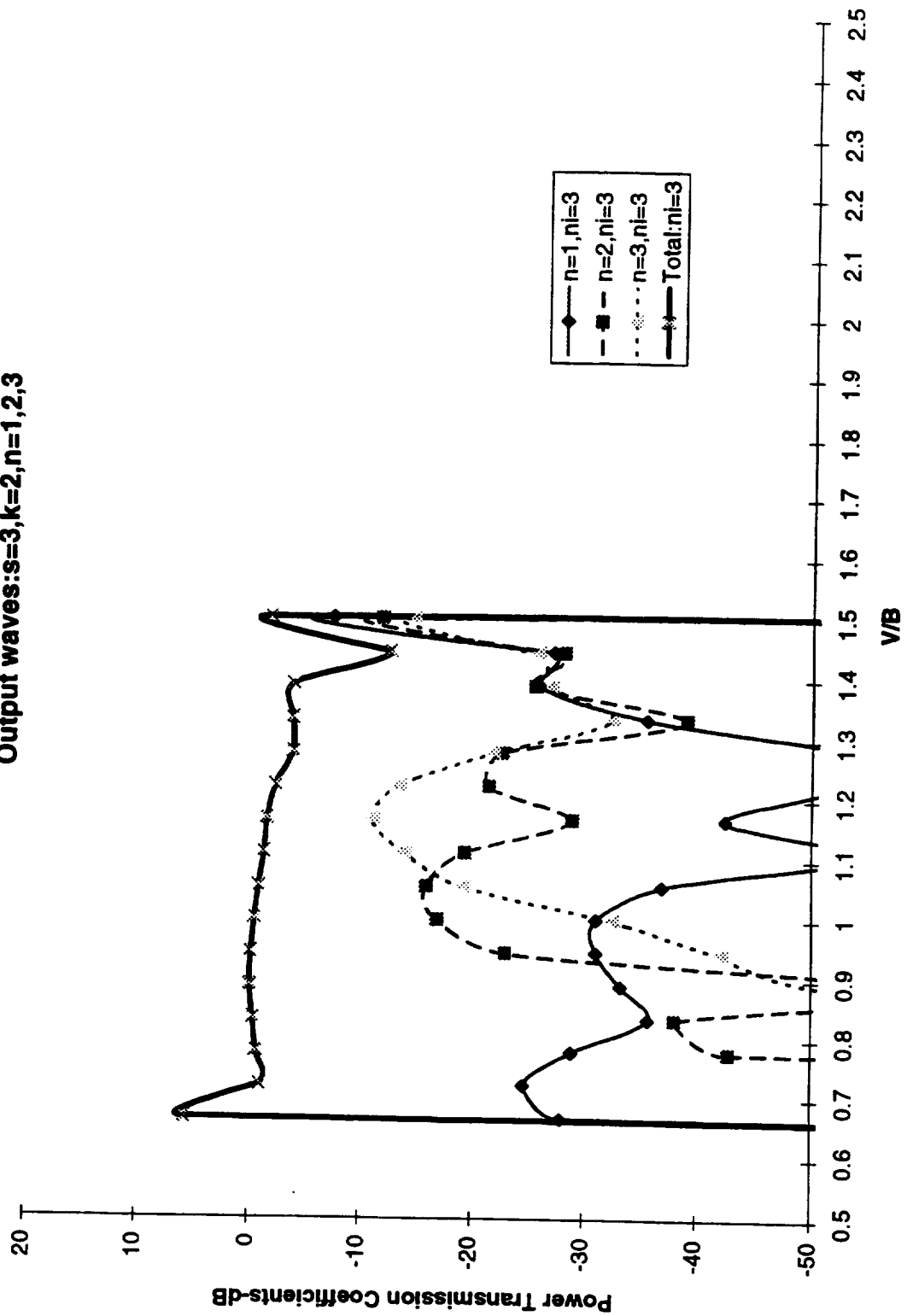
Output waves: $s=3, k=1, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

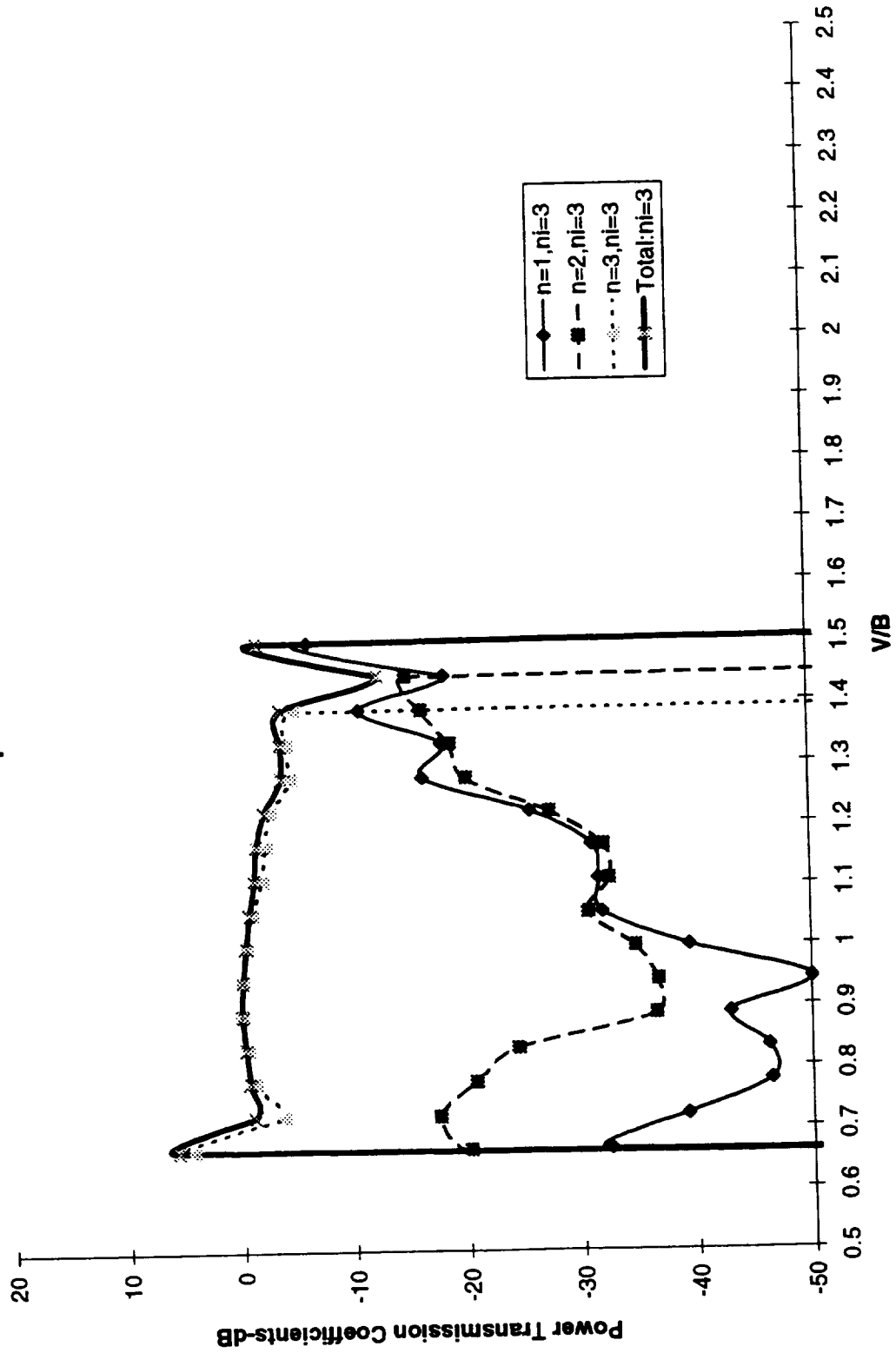
Output waves: $s=3, k=2, n=1, 2, 3$



Stator Transmission-Mid Speed Case

Input wave: $s_i=3, k_i=3, n_i=3$

Output waves: $s=3, k=3, n=1, 2, 3$



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1. Meyer, H. D., "Acoustic Scattering by Three-Dimensional Stators and Rotors Using the SOURCE3D Code, Volume 1: Analysis and Results," NASA CR, 1997.
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